

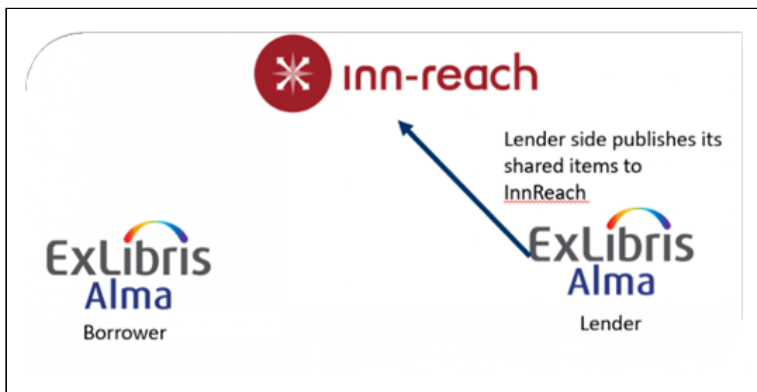
InnReach API Implementation Guide

Objective

The purpose of this document is to explain the general workflow of a customer that uses INN-Reach and Alma using the API based integration, including the PS/Support tools that are required for the initial setup. See also [Visiting Patrons in an InnReach Network](#).

Publishing

INN-Reach knowledge about the availability of items in the network is based on the institutions' use of the API to notify INN-Reach about bib and items records' status. In Alma, the publishing platform is configured to publish this information using the INN-Reach APIs.



The top screenshot shows the Alma record for "The Book of Intimate Grammar" by David Grossman. It includes details like the ISBN (9781505470302), language (English), and a table of holdings. The bottom screenshot shows how the same record appears in the InnReach interface, including the title, author, and a "REQUEST THIS ITEM" button.

Workflow

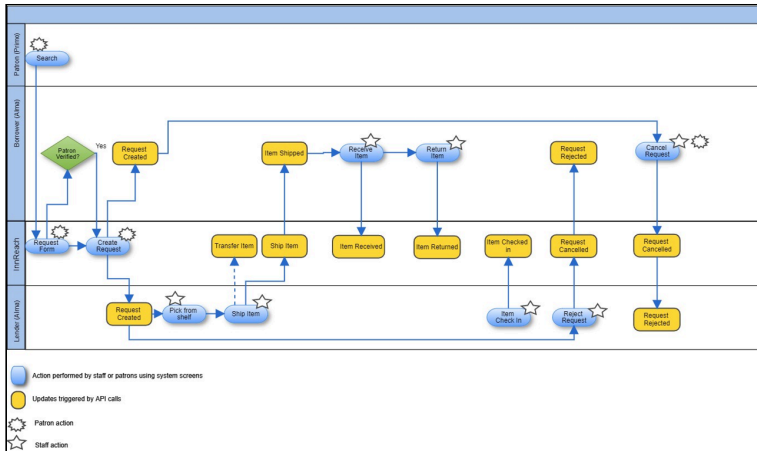
Once the records have been published, borrowers will be able to request the items.

A demo of the integration is found [here](#). The demo and the below captures have been done with an INN-Reach sandbox test environment.

Below is the flowchart of the workflow. In this diagram, Alma is playing both the borrower and the lender role. This is done

to present one chart that shows Alma's role as borrower and its role as lender. Many times, Alma will be either on the borrower side or on the lender side but not on both.

The flowchart illustrates the communications that flow between INN-Reach and Alma. INN-Reach messages that Alma ignores are not shown in this diagram.

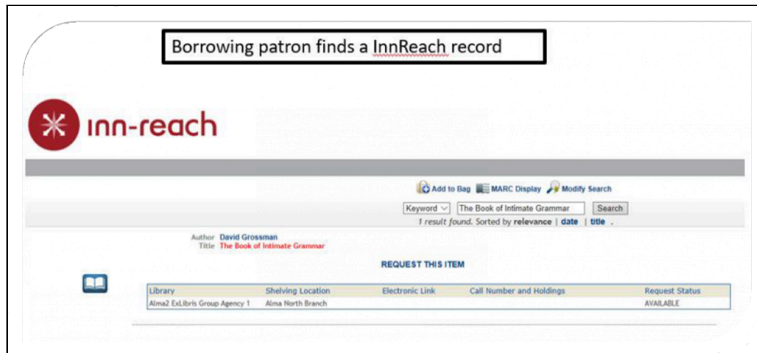


InnReach/Alma Flowchart

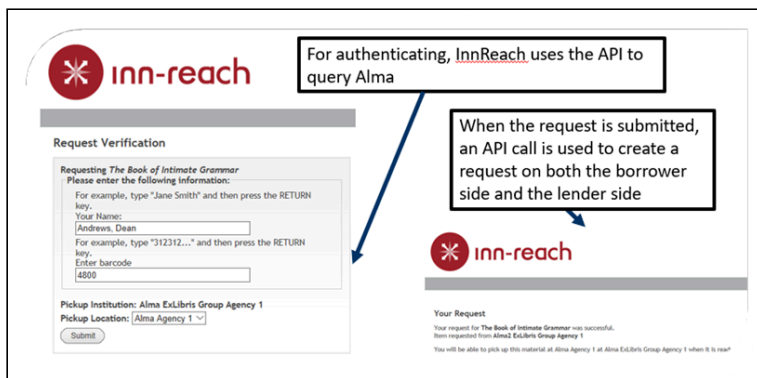
Placing a Request

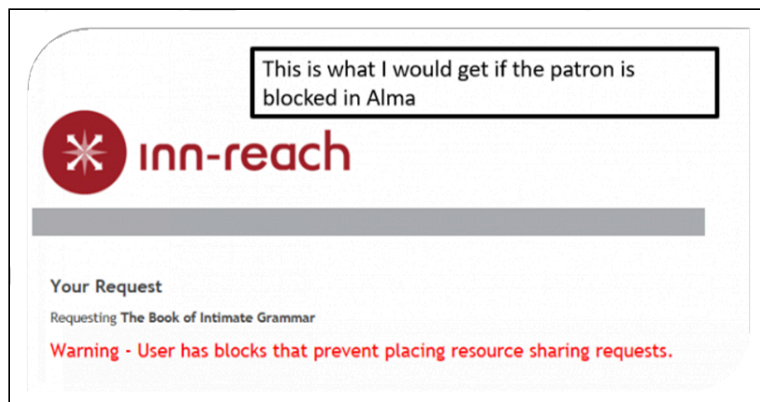
The initial creation of the request is done directly in INN-Reach. General Electronic Services may be used to create OpenURL links from Primo search results to INN-Reach request forms, as described in the [General Electronic Services](#) section.

1. Request is placed in INN-Reach.

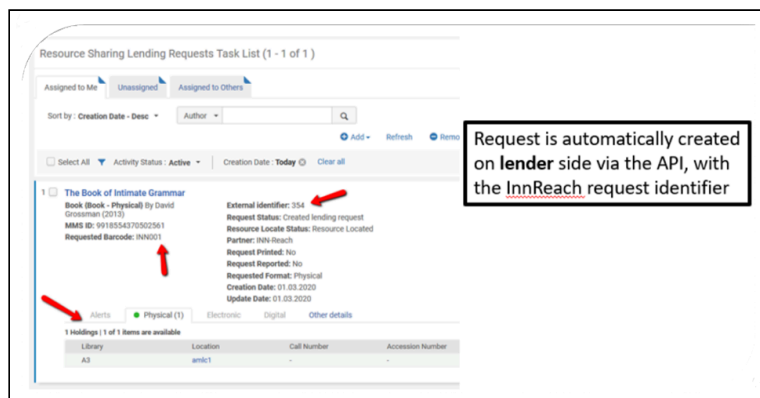
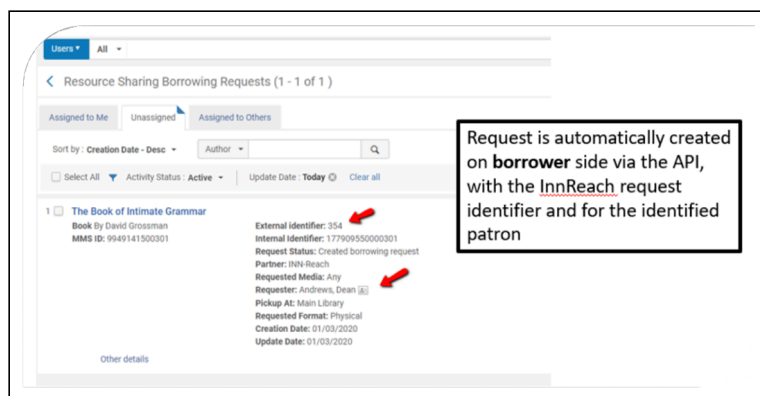


2. Patron Authentication





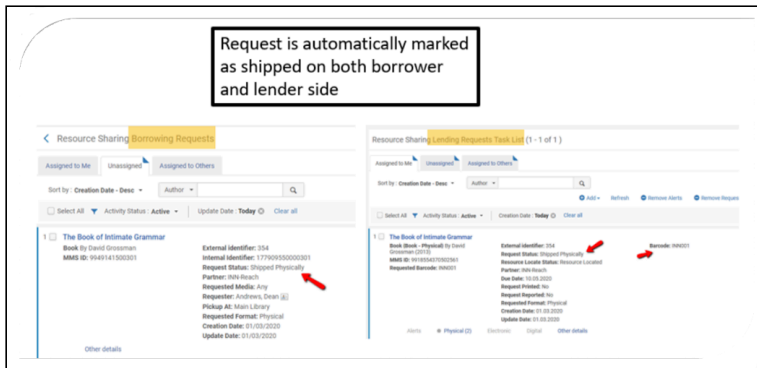
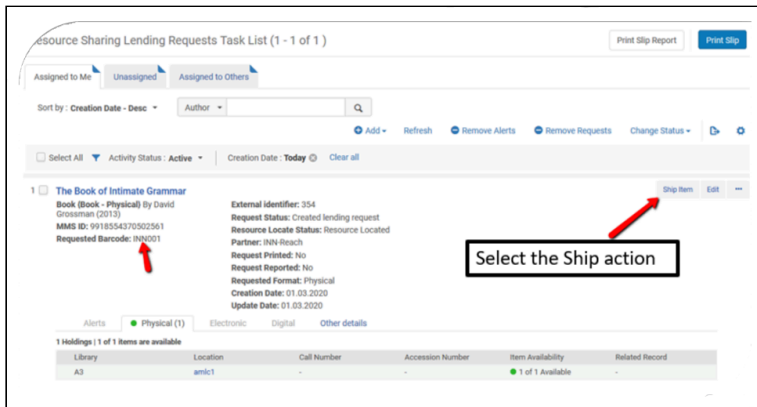
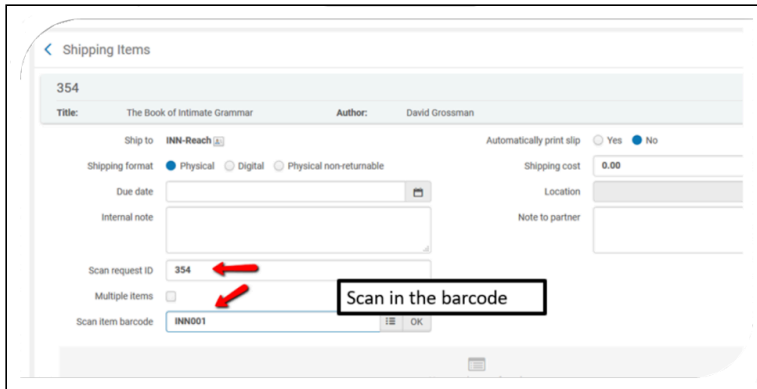
3. Request is created



Shipping an Item

Once a lending request has been automatically created by the API, the lender's processing is the standard Alma workflow for processing lending requests. Pick slips may be created from the Lending Requests task list or move requests may be created for branch processing of the physical items using the Manage Fulfillment Options task list action. Requests for branch processing may also be automatically created by Alma. See more information at [Peer to Peer Resource Sharing - Lending](#).

After the item has been fetched staff uses the **Fulfillment > Resource Sharing > Shipping Items** menu to ship the item.



Other Actions

Additional supported actions are:

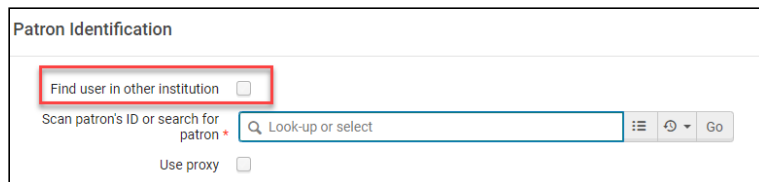
- **Receive** – Borrower can do the receive action using the regular Alma interfaces. INN-Reach is automatically updated. Note that Alma on the lender side does not register the fact that a borrower has done a receive action. See [Receiving an Item from a Resource Sharing Request](#).
- **Return** – Borrower can do the return action using the regular Alma interfaces. INN-Reach is automatically updated. Note that Alma on the lender side does not register the fact that a borrower has done a return action. See [Returning a Resource Sharing Item to the Lender](#).
- **Cancel** – Borrower can do the cancel action using the regular Alma/Primo interfaces. INN-Reach is automatically updated. Alma on the lender side is updated that a borrower has done a cancel action. See [Canceling a Resource Sharing Request](#).
- **Reject** – Lender can do the reject action using the regular Alma interfaces. INN-Reach is automatically updated. Alma on the lender side is updated so that a borrower has done a cancel action.

(New for February) Visiting Patron Checkout

If you are configured to use V3 of the INN-Reach Integration Profile (see [Integration Profile](#)) then patrons of other INN-Reach institutions (that also use V3) can directly checkout items from your library.

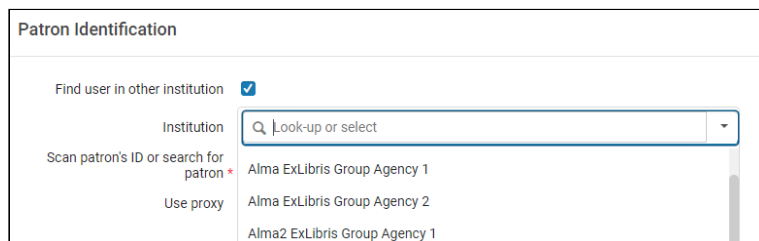
To Checkout Items from a Visiting Patron's Library:

1. On the Patron Identification page (if you are configured with V3 for INN-Reach Integration Profile as described in [Integration Profile](#)) select the **Find user in other institution** checkbox.




The screenshot shows the 'Patron Identification' form. The checkbox 'Find user in other institution' is checked and highlighted with a red box. Below it is a search input field with the placeholder text 'Look-up or select' and a 'Go' button. There is also an unchecked 'Use proxy' checkbox.

2. Select the patron's institution.



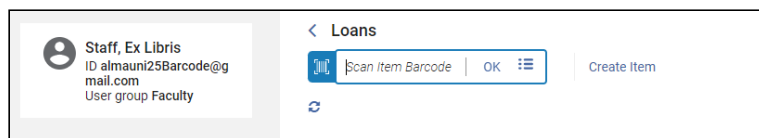
The screenshot shows the 'Patron Identification' form with the 'Find user in other institution' checkbox checked. The 'Institution' dropdown menu is open, showing a search field and a list of institutions: 'Alma ExLibris Group Agency 1', 'Alma ExLibris Group Agency 2', and 'Alma2 ExLibris Group Agency 1'. The 'Use proxy' checkbox is unchecked.

3. Enter the patron's ID and select **Find User**.



The screenshot shows the 'Patron Identification' form with the 'Find user in other institution' checkbox checked. The 'Institution' dropdown is set to 'Alma ExLibris Group Agency 1'. The search input field contains the ID 'ex_lmpl' and the 'Find User' button is highlighted with a red box. The 'Use proxy' checkbox is unchecked.

4. If the patron's id is authorized by their institution, you can now enter items to checkout for the patron.



The screenshot shows the 'Loans' page. On the left, there is a user profile for 'Staff, Ex Libris' with ID 'almauni25Barcode@gmail.com' and user group 'Faculty'. The main area has a 'Scan Item Barcode' input field with an 'OK' button and a 'Create Item' button. There is also a refresh icon below the input field.

5. After the barcode is entered and the **Update INN-Reach Requests** job runs, lending request/s are created at the lending library and borrowing request/s at the patron's home library. From this point on the request is handled as a regular resource sharing request

Configuration

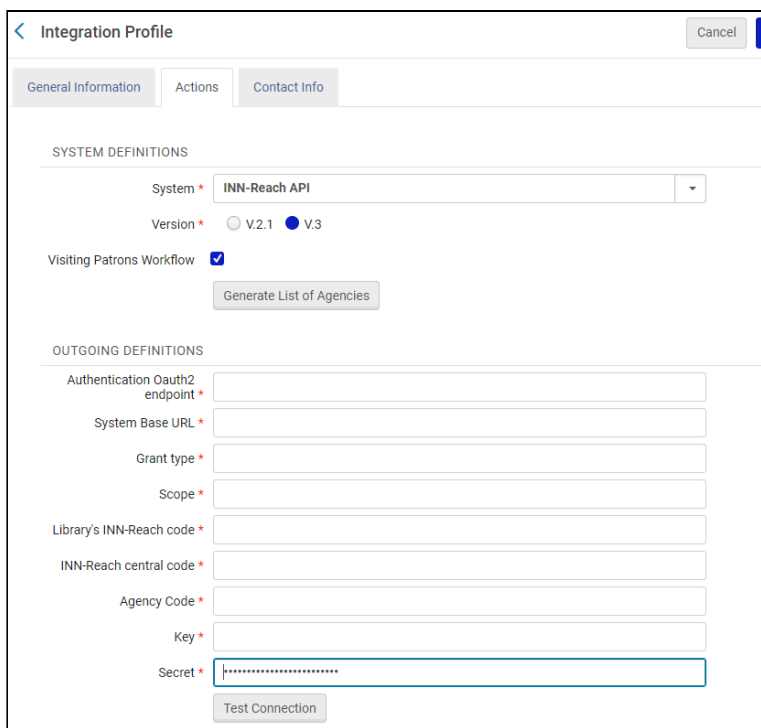
Integration Profile

A library integrated with INN-Reach APIs must have an **INN-Reach integration** profile. In order to participate in an INN-Reach resource sharing workflow, the library must have an integration profile of type 'Resource Sharing Integration' (first step of defining the Integration Profile) and system 'INN-Reach API' (second step of defining the Integration Profile). See [Integration Profiles](#) for instructions on creating and editing integration profiles. Note that for INN-Reach the Integration Type must be **Resource Sharing Integration**.



The screenshot shows the 'Integration Profile' form at step 1. The 'Code' field is 'INNREACH' and the 'Name' field is 'INNREACH'. The 'Integration Type' dropdown menu is open and shows 'Resource Sharing Integration' selected, which is highlighted with a yellow border. There are 'Cancel' and 'Next' buttons at the top right.

If you are setup to work with INN-Reach D2IR V3 you can also configure your system to work with that version. This requires the **Update INN-Reach Requests** job (see [Scheduled Jobs](#)) to be active (**Configuration > Fulfillment > General > Fulfillment Jobs Configuration**). When this job runs, it updates the status of your requests every two hours.



The screenshot shows the 'Integration Profile' form at step 2. The 'System' dropdown is 'INN-Reach API' and 'Version' is 'V.3'. The 'Visiting Patrons Workflow' checkbox is checked, and there is a 'Generate List of Agencies' button below it. The 'Outgoing Definitions' section has several empty input fields: 'Authentication OAuth2 endpoint', 'System Base URL', 'Grant type', 'Scope', 'Library's INN-Reach code', 'INN-Reach central code', 'Agency Code', 'Key', and 'Secret'. A 'Test Connection' button is at the bottom.

You can check with Innovative regarding which version of INN-Reach is relevant to your organization.

If you selected the Version 3 (V3) option, the Visiting Patrons Workflow checkbox displays and you can select it to use the Visiting Patrons Workflow functionality (see [Visiting Patrons in an InnReach Network](#)). In this case, make sure to select the **Generate List of Agencies** option in order to correctly reflect the list of INN-Reach libraries that you can interact with.

The **Outgoing Definitions** of the Integration Profile have to be filled in based on information supplied by Innovative. Below is an example.

Integration Profile

SYSTEM DEFINITIONS

System *

OUTGOING DEFINITIONS

Authentication Oauth2 endpoint *

System Base URL *

Grant type *

Scope *

Library's INN-Reach code *

INN-Reach central code *

Agency Code *

Key *

Secret *


The **Incoming Definitions** are automatically generated. Use the **Generate Secret** button to have Alma generate a secret. After generating the secret, use the 'Copy to clipboard' link that appears on the page in order to get the generated secret. The information in this section as well as the secret are required in order to configure the INN-Reach side of the integration.

INCOMING DEFINITIONS

Alma Oauth2 parameters

Oauth2 parameters

Key

Secret [Copy to clipboard](#) 

[Mapping of Alma user groups to central patron types](#)

Mapping Alma user groups to INN-Reach central patron types is required. To do this, follow the procedures below:

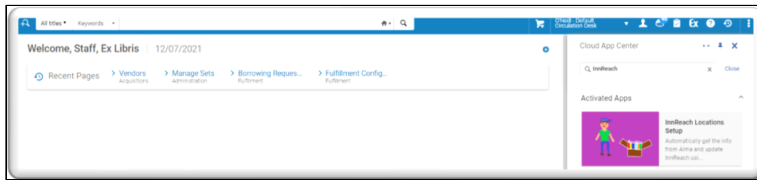
1. Click the **Mapping of Alma user groups to central patron types** link under Incoming Definitions.
2. Click **Add Row**.
3. Select a user group and enter the **Central Patron Type** provided by the INN-Reach project manager.
4. Click **Add Row** and repeat until all necessary user groups are accounted for.

Mapping Alma locations to central item types is required for lending. To do this, follow the procedures below:

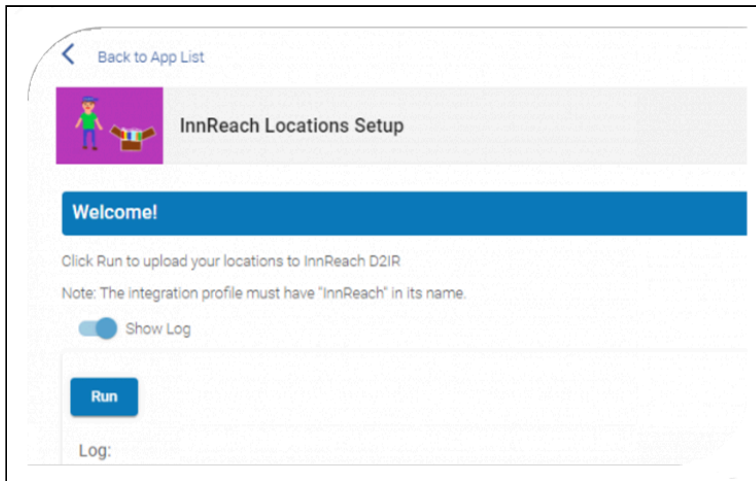
1. Click the **Mapping of Alma location codes to central item types** link under **Outgoing Definitions**.
2. Click **Add Row**.
3. Enter the library code in the **Library Code** field.
4. Enter the location code in the **Location Code** field, and the central item type in the **Null** field. Central item types should be provided by the INN-Reach project manager.

Setting Locations

Updating locations in INN-Reach must be done after the integration profile has been set up since it requires that the integration profile be already configured and have "INN-Reach" in its name. The setup is done using the 'INN-Reach Locations Setup' cloud application.



Once installed, the application simply needs to be run. It is recommended to run with the **Show Log** option ON.



Note

The location codes are exported to Alma as 5 lower case alphanumeric characters and not with the Alma codes. This is due to an INN-Reach requirement. The descriptions are exported unchanged.

Re-run the application every time a location that should be published to INN-Reach is added to Alma's configuration.

InnReach Sets

In order for the lender to publish to INN-Reach, it must be configured with a physical titles set that is used as input to the publishing profile. The set must include all of the physical titles that are part of the INN-Reach requesting system, and will be defined by the library as per the library's criteria for this purpose.

Publishing Profiles

In order for the lender to publish to INN-Reach, it must be configured with:

- A BIB level publishing profile:

The profile is set to use the set defined for INN-Reach and will be set to use the Publishing Protocol 'INN-Reach'.

Publishing Profile Details

Profile Name INN-Reach BIBs

Profile Details | **Data Enrichment**

Profile Details

Profile Name * **INN-Reach BIBs**

Profile Description

Publishing Parameters

Status Active Inactive

Scheduling **Not scheduled**

Email Notifications

Content

Set name * **amlc1 Items**

Filter out the data using

Publish on: **Bibliographic level**

Output format **MARC21 Bibliographic**

Publishing Protocol

FTP

INN-Reach

- An Items level publishing profile:

The profile is set to use the set defined for INN-Reach.

Publishing Profile Details

Profile Name INN-Reach - Items

Profile Details | **Data Enrichment**

Profile Details

Profile Name * INN-Reach - Items

Profile Description

Publishing Parameters

Status Active Inactive

Scheduling Not scheduled

Email Notifications

Content

Set name * amlc1 Items

Filter out the data using

Publish on: Item/Portfolio level

Please note that a bibliographic record will

Output format MARC21 Bibliographic

Publishing Protocol

FTP

INN-Reach

The **Data Enrichment** tab must be set to include items information as below:

Data Enrichment tab settings

Field	Items Information Setting
Repeatable	Must be a field that is not used in cataloged MARC records, for example 990.
Item PID	0
Material Type	a
Copy ID subfield	e
Item Status	b
Current Library	c

Field	Items Information Setting
Repeatable	Must be a field that is not used in cataloged MARC records, for example 990.
Current Location	d
Description subfield	v
Call Number subfield	t

Partner Record

The INN-Reach resource sharing partner record is used for the borrowing and lending requests communication. The partner record will:

- Have an 'INN-Reach API' type.
- Be defined **to allow** sharing patron information.
- The workflow profiles (Borrower AND lender) must be set **not to use** 'cancel reply'.

If your INN-Reach workflow involves using the lender's item barcodes at the borrower side, then the **Shared Barcodes** option should also be turned ON.

Note

The item policies to select from should be configured (**Fulfillment Configuration>Physical Fulfillment>Item Policy**) when at the scope of the resource sharing library.

Resource Sharing Partner

INN-Reach

Partner Code: INNREACH Profile Type: INN-Reach API System Type: INN-Reach API

General Information Contact Information Parameters Notes

Code * INNREACH Name * INN-Reach

Profile Type * **INN-Reach API** Status: Active

System Type * INN-Reach API

Average Supply Time: 0 Delivery Delay (days): 0

Currency: Locate Profile:

Supports Borrowing Borrowing Workflow: Cactus_WorkflowP

Supports Lending Lending Workflow: Cactus_WorkflowP

Resource Sharing Partner

Partner Code: INNREACH Profile Type: INN-Reach API System Type: INN-Reach API

General Information Contact Information Parameters Notes

GENERAL INFORMATION

Integration profile * INN-Reach

User identifier type * Barcode Request pushing method * Open URL Link

URL template: Enable service for guest user: Yes No

Disable service when: Never

When resource is owned by the campus

When resource is owned by the campus and available

When resource is owned by the institution

When resource is owned by the institution and available

Loan period: Default library owner * Resource Sharing Library

Download Certificate

INCOMING ITEM

Default location * Borrowing Resource Sharing Requests Default pickup library: Main Library

CHECK-OUT ITEM

Default location * Borrowing Resource Sharing Requests Default item policy * Three Day Loan

Shared Barcodes

LOOK UP USER

Require Authentication: Yes No

Share patron information: Yes No

Workflow Profiles

The INN-Reach Partner records need to be linked to a Borrowing workflow profile that enables cancelling by patron and staff, but does not wait for cancel replies.

Workflow Profile: InnReach Type: Borrowing

Steps:

- Automatic renew
- Cancelled By Patron
- Cancelled by staff
- Damaged communicated
- Externally Obtained
- Lost communicated
- Mediated Patron Renewal
- Recalled by partner
- Renew requested
- Waiting for cancel response
- Will Supply
- Cancel request not accepted
- Cancelled by partner
- Conditional
- Declared lost by partner
- Lender check in
- Manual renew
- Reactivated
- Reject
- Request accepted
- Waiting for receive digitally

Buttons: Cancel, Save (Alt+S)

If renewals are to be enabled, then it is recommended to:

1. Set the lending workflow:
 - a. **NOT** require Renewal response.
 - b. Allowing patron renewal from Primo is done by activating the **Patron Renewal** action.
 - c. Allowing the staff renewal from Alma is done by activating the **Staff Renewal** action.

Workflow Profile: LEND1 Type: Lending

Steps:

- Borrower recall
- Conditional
- Patron renewal
- Renewal response
- Cancel reply
- Lender check in
- Reactivated
- Staff renewal

2. It is recommended to set the borrowing workflow with **Mediated Patron Renewal**. This will cause patron renewals from Primo to set the borrowing request to a status of Mediated Patron Renewal. Staff then uses the borrower task list **Request Renew** action to renew the borrower request. This will also have the effect of renewing the patron loan, and sending a **Borrowing Info Letter** notification to the patron.

Workflow Profile: BORROW1 Type: Borrowing

Steps:

- Automatic renew
- Cancelled By Patron
- Cancelled by staff
- Damaged communicated
- Externally Obtained
- Lost communicated
- Mediated Patron Renewal
- Recalled by partner
- Renew requested
- Waiting for cancel response
- Will Supply
- Cancel request not accepted
- Cancelled by partner
- Conditional
- Declared lost by partner
- Lender check in
- Manual renew
- Reactivated
- Reject
- Request accepted
- Waiting for receive digitally

Buttons: Cancel, Save (Alt+S)

Other Settings

- `rs_allow_actions_on_scan_in` – recommended to be **False** in order to prevent lenders' items that are being checked back in from being automatically re-shipped by Alma.
- `rs_keep_rejected_request_active` – recommended to be **None** so that rejected requests do not remain on the active task list.
- `rs_auto_request_lending` – recommended to be 'true' so that lending requests automatically link up to the inventory that will be used for fulfilling the request. It is also required to make sure the 'Is Requestable for Physical Resource Sharing' policy on the request TOU is set to 'true' for all resource sharing lendable items. For more information see [Physical Fulfillment](#).