

User Centric Improvements with ILLiad and NCIP



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Operations & Training**

Background

- Harvard Library reorganization 2012
- Centralization of Resource Sharing services
- Centralized workflows = looking for efficiencies

Current State

- **Borrowing and Lending Operations**
 - BHA (Harvard-Andover Theological Library)
 - FLL (Loeb Design Library)
 - HBS (Harvard Business School)
 - HLS (Harvard College)
 - HMG (Graduate School of Education)
 - HMS (Countway Medical Library)
 - HMY (Harvard-Yenching Library) lending only
 - HMZ (Ernst Mayr Library)
 - HVL (Harvard Law Library)
 - KSG (Kennedy School Library)
 - *DDO (Dumbarton Oaks Research Institution)*
 - *Washington, D.C.*
 - *HTV (Villa I Tatti)*
 - *Italy*
- **Lending only**
 - CLS (Cabot Science Library)
 - HUL (Harvard Depository)
 - MCS (Sciences – Physics/Chemistry)

Future State?

- Borrowing/Lending
 - HUL (Harvard University)
 - HVL (Law)
 - HMS (Medical)
 - DDO (Dumbarton Oaks)

Patron Benefits

- Patrons select pick up location other than home library
- Return to any Harvard Library
 - Overdue notices
- One place to view and renew checked out items
- Standard due date/renewal policy for circulating items
- More items circulate
 - Foreign
 - Multi-volume

Staff Benefits

- “I never checked out this item!”
- Less confusion about renewal process
- Track returns to other Harvard Libraries
- Lost item charges
- Fewer steps in lending workflow

Planning

- Bookstraps vs slips and their design
 - Slips save time (and paper)
 - Bookstraps are not as easily lost, align with Borrow Direct service
- Email and print templates in Aleph
 - Can't distinguish between in-library-use only and circulating
 - Minimal wording
- Print templates in ILLiad
 - Word template mail merge
 - If-then statements (TN-) (LU-)



IDS PROJECT



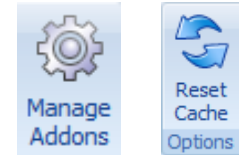
Unlocking innovations to solve
resource sharing's biggest problems.

Bill Jones
Creative Technologist

Types of Addons

Client Side Addon

- Installed in the ILLiad\Addons directory
- Run within the Client using a ribbon and buttons
- Error logs appear in C:\Users\username\Documents\ILLiad\Logs\ILLiadClient.txt
- Refreshed using Manage Addons -> Reset Cache



System Addon

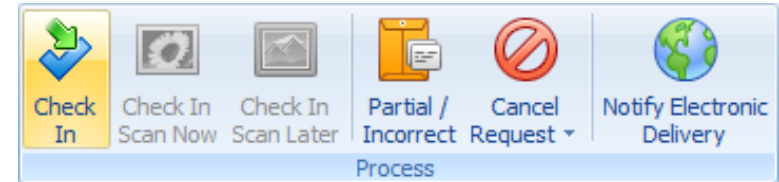
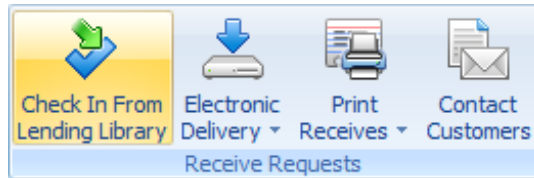
- Installed in the ILLiad\Addons directory
- Run within the Client through Registered Event Handlers
- Error logs appear in C:\Users\username\Documents\ILLiad\Logs\ILLiadClient.txt
- Refreshed by restarting ILLiad

Server Addon

- Installed through Customization manager and saved in a database
- Run outside of the Client on the server at specific time intervals
- Error logs appear in C:\Users\username\Documents\ILLiad\Logs\CustomizationManager.txt
- Refreshed by increasing the version number in the Config window

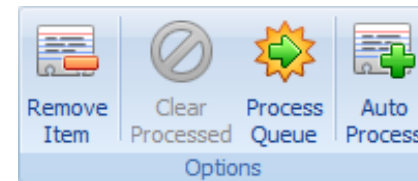
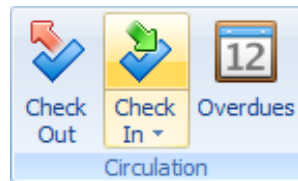


Borrowing Functions: Syncing Two Systems



Receiving Borrowed item at Harvard

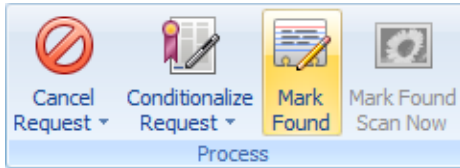
- AcceptItem Call
- “Check In” button is clicked from “Check In From Lending Library”
- Creates minimal record in Aleph from ILLiad transaction information
- Creates Aleph Item Record and Live Hold for Patron



Item Returned by Harvard Patron

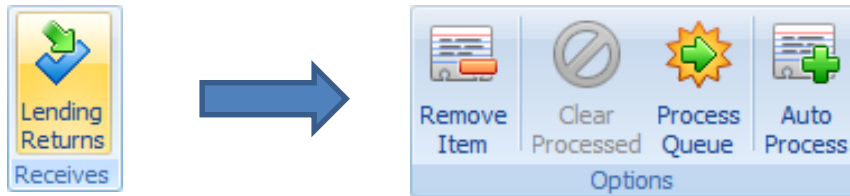
- CheckInItem Call
- “Process Queue” is clicked during “Check In Item”
- Allows for Auto Processing for multiple transactions
- Discharges item from patron in Aleph

Lending Functions: Syncing Two Systems



After Item is Pulled From Stacks

- CheckoutItem Call
- "Mark Found" button is clicked during "Update Stacks Searching"
- Checks item out to pseudopatron in Aleph



Item is Returned by Borrowing Library

- CheckInItem Call
- "Process Queue" is clicked during "Lending Returns"
- Allows for Auto Processing for multiple transactions
- Discharges item from pseudopatron (borrowing library) in Aleph

Registered Event Handlers

```
function Init()  
RegisterSystemEventHandler("Name_of_event_handler", "name_of_function");  
end
```

("Name_of_event_handler", "name_of_function");

These are very specific ILLiad names tied to very specific button clicks



These are not NCIP specific

These are not specific. You can customize these names.

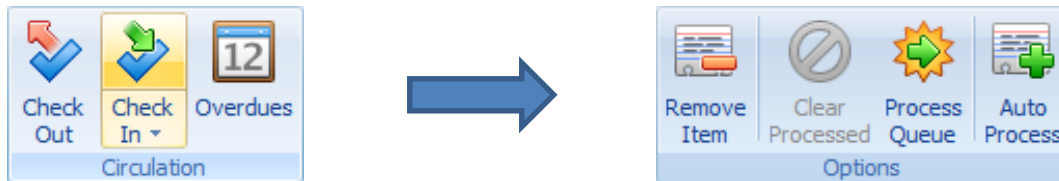


So Which Registered Event Handlers?



BorrowingRequestCheckedInFromLibrary

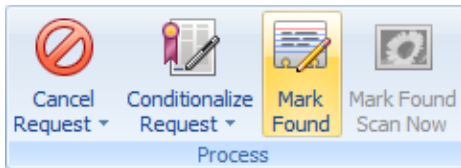
This will trigger whenever a non-cancelled transaction is processed from the Check In From Lending Library batch processing form using the Check In, Check In Scan Now, or Check In Scan Later buttons.



BorrowingRequestCheckedInFromCustomer

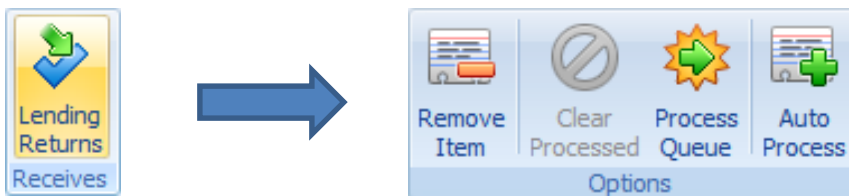
This will trigger whenever an item is processed from the Check Item In batch processing form, regardless of its status (such as if it were cancelled or never picked up by the customer).

So Which Registered Event Handlers?



LendingRequestCheckOut

This will trigger whenever a transaction is processed from the Lending Update Stacks Searching form using the Mark Found or Mark Found Scan Now buttons. This will also work on the Lending Processing ribbon of the Request form for the Mark Found and Mark Found Scan Now buttons.

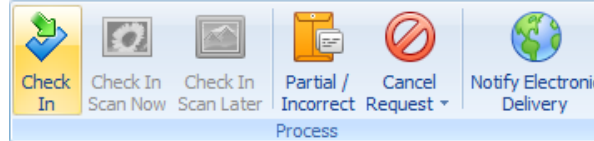


LendingRequestCheckIn

This will trigger whenever a transaction is processed from the Lending Returns batch processing form.

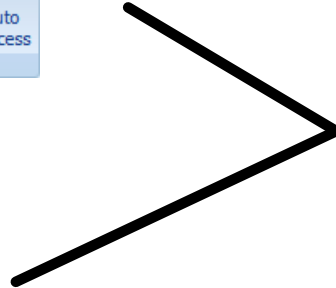
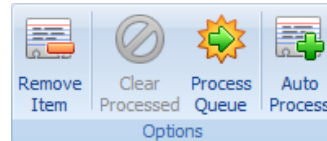
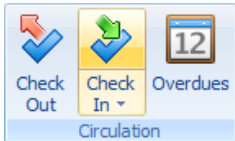
Understanding the XML Messages from ILLiad

BorrowingRequestCheckedInFromLibrary



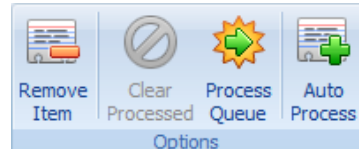
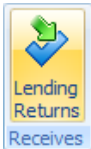
AcceptItem Scheme

BorrowingRequestCheckedInFromCustomer



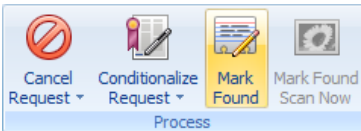
CheckedIn Scheme

LendingRequestCheckIn



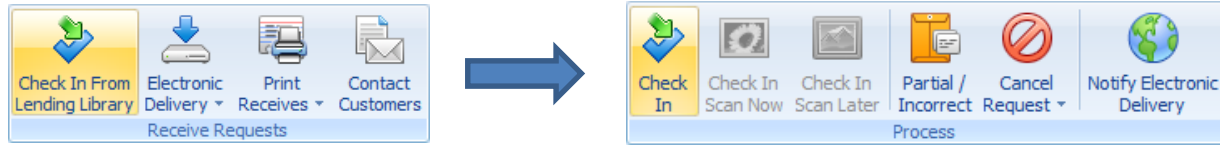
Slightly different based on the Item Identifier

LendingRequestCheckOut



CheckedOut Scheme

XML: AcceptItem Call



49 lines for the message

Easy Breakdown:

*From Unique Agency

*To Unique Agency

Pickup Location (pulled from pre-defined .txt list)

*Unique Request ID/Unique Agency ID

Request Identifier Value (configurable TN#)

*Requested Action Type

*Unique Agency ID

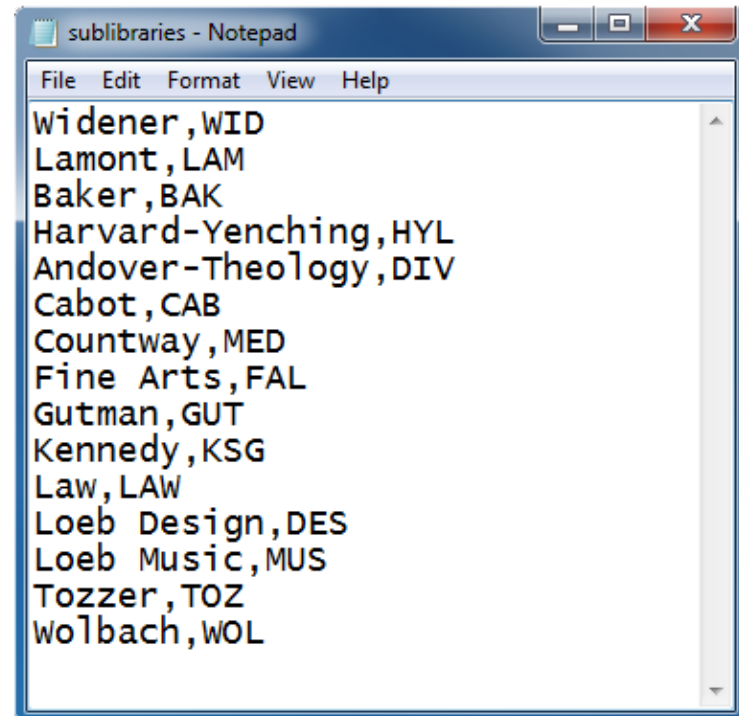
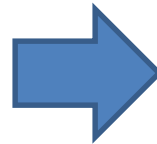
Unique User (User ID, Pulled from Transaction)

Unique Item (configurable TN#)

Bibliographic Description (Author & Title, Pulled from Transaction)

AcceptItem: Setting the Pick up Location

```
local pickup_location_full = GetFieldValue("Transaction", "Location");
local sublibraries = assert(io.open("c:\\Program Files\\ILLiad\\Addons\\IDS_NCIP_Client\\sublibraries.txt", "r"));
  if sublibraries == nil then
    sublibraries = assert(io.open("c:\\Program Files (x86)\\ILLiad\\Addons\\IDS_NCIP_Client\\sublibraries.txt", "r"));
  end
local pickup_location = "";
local templine = nil;
if sublibraries ~= nil then
  for line in sublibraries:lines() do
    if string.find(line, pickup_location_full) ~= nil then
      pickup_location = string.sub(line, line:len() - 2);
      break;
    else
      pickup_location = "nothing";
    end
  end
end
sublibraries:close();
end
```



```
File Edit Format View Help
Widener, WID
Lamont, LAM
Baker, BAK
Harvard-Yenching, HYL
Andover-Theology, DIV
Cabot, CAB
Countway, MED
Fine Arts, FAL
Gutman, GUT
Kennedy, KSG
Law, LAW
Loeb Design, DES
Loeb Music, MUS
Tozzer, TOZ
Wolbach, WOL
```

Configurable Transaction Prefixes

Transaction prefixes are configurable and indicate whether:

- The item is Renewable (RE-)
- The item is Library Use Only (LU-)
- The item is Library Use Only and Renewable (LR-)
- The item is not Renewable and is not Library Use Only (TN-)

```
local tn = "";
if Settings.Use_Prefixes then
    local t = GetFieldValue("Transaction", "TransactionNumber");
    if GetFieldValue("Transaction", "LibraryUseOnly") and GetFieldValue("Transaction", "RenewalsAllowed") then
        tn = Settings.Prefix_for_LibraryUseOnly_and_RenewalsAllowed .. t;
    end
    if GetFieldValue("Transaction", "LibraryUseOnly") and GetFieldValue("Transaction", "RenewalsAllowed") ~= true then
        tn = Settings.Prefix_for_LibraryUseOnly .. t;
    end
    if GetFieldValue("Transaction", "RenewalsAllowed") and GetFieldValue("Transaction", "LibraryUseOnly") ~= true then
        tn = Settings.Prefix_for_RenewalsAllowed .. t;
    end
    if GetFieldValue("Transaction", "LibraryUseOnly") ~= true and GetFieldValue("Transaction", "RenewalsAllowed") ~= true then
        tn = Settings.acceptItem_Transaction_Prefix .. t;
    end
else
    tn = Settings.acceptItem_Transaction_Prefix .. GetFieldValue("Transaction", "TransactionNumber");
end
```

(Written in .lua)

ILliad tells Aleph what to do via XML Message:

```
350 local m = '';  
351 m = m .. '<NCIPMessage version="http://www.niso.org/ncip/v1_0/impl/dtd/ncip_v1_0.dtd">'  
352 m = m .. '<AcceptItem>'  
353 m = m .. '<InitiationHeader>'  
354 m = m .. '<FromAgencyId>'  
355 m = m .. '<UniqueAgencyId>'  
356 m = m .. '<Scheme>' .. Settings.acceptItem_from_uniqueAgency_scheme .. '</Scheme>'  
357 m = m .. '<Value>' .. Settings.acceptItem_from_uniqueAgency_value .. '</Value>'  
358 m = m .. '</UniqueAgencyId>'  
359 m = m .. '</FromAgencyId>'  
360 m = m .. '<ToAgencyId>'  
361 m = m .. '<UniqueAgencyId>'  
362 m = m .. '<Scheme>' .. Settings.acceptItem_to_uniqueAgency_scheme .. '</Scheme>'  
363 m = m .. '<Value>' .. pickup_location .. '</Value>'  
364 m = m .. '</UniqueAgencyId>'  
365 m = m .. '</ToAgencyId>'  
366 m = m .. '</InitiationHeader>'  
367 m = m .. '<UniqueRequestId>'  
368 m = m .. '<UniqueAgencyId>'  
369 m = m .. '<Scheme>' .. Settings.acceptItem_uniqueRequest_agency_scheme .. '</Scheme>'  
370 m = m .. '<Value>' .. Settings.acceptItem_uniqueRequest_agency_value .. '</Value>'  
371 m = m .. '</UniqueAgencyId>'  
372 m = m .. '<RequestIdentifierValue>' .. tn .. '</RequestIdentifierValue>'  
373 m = m .. '</UniqueRequestId>'  
374 m = m .. '<RequestedActionType>'  
375 m = m .. '<Scheme>' .. Settings.acceptItem_reqActiontype_scheme .. '</Scheme>'  
376 m = m .. '<Value>' .. Settings.acceptItem_reqActiontype_value .. '</Value>'  
377 m = m .. '</RequestedActionType>'  
378 m = m .. '<UniqueUserId>'  
379 m = m .. '<UniqueAgencyId>'  
380 m = m .. '<Scheme>' .. Settings.acceptItem_uniqueUser_agency_scheme .. '</Scheme>'  
381 m = m .. '<Value>' .. Settings.acceptItem_uniqueUser_agency_value .. '</Value>'  
382 m = m .. '</UniqueAgencyId>'  
383 m = m .. '<UserIdentifierValue>' .. user .. '</UserIdentifierValue>'  
384 m = m .. '</UniqueUserId>'  
385 m = m .. '<UniqueItemId>'  
386 m = m .. '<UniqueAgencyId>'  
387 m = m .. '<Scheme>' .. Settings.acceptItem_uniqueItem_agency_scheme .. '</Scheme>'  
388 m = m .. '<Value>' .. Settings.acceptItem_uniqueItem_agency_value .. '</Value>'  
389 m = m .. '</UniqueAgencyId>'  
390 m = m .. '<ItemIdentifierValue>' .. tn .. '</ItemIdentifierValue>'  
391 m = m .. '</UniqueItemId>'  
392 m = m .. '<ItemOptionalFields>'  
393 m = m .. '<BibliographicDescription>'  
394 m = m .. '<Author>' .. author .. '</Author>'  
395 m = m .. '<Title>' .. title .. '</Title>'  
396 m = m .. '</BibliographicDescription>'  
397 m = m .. '</ItemOptionalFields>'  
398 m = m .. '</AcceptItem>'  
399 m = m .. '</NCIPMessage>'  
400 n = AtlasHelpers.UrlEncode(m) ;  
401 return n ;  
402 end
```

Borrowing: Configurable Transaction Prefixes

25 lines for the message

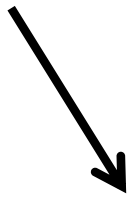
Easy Breakdown:

*From Unique Agency

*To Unique Agency

*Unique Agency ID

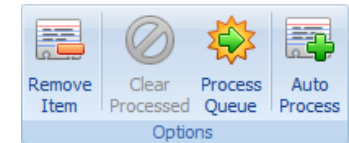
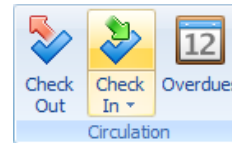
Item Identifier Value



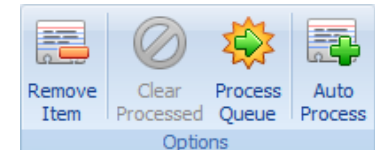
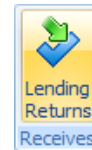
In the **Borrowing workflow**, this item identifier could be ??-##### or TN-#####

In the **Lending workflow**, this item identifier could be the Transaction Number or Item Number

Borrowing



Lending



Borrowing: Configurable Transaction Prefixes

```
local tn = "";
if Settings.Use_Prefixes then
    local t = GetFieldValue("Transaction", "TransactionNumber");
    if GetFieldValue("Transaction", "LibraryUseOnly") and GetFieldValue("Transaction", "RenewalsAllowed") then
        tn = Settings.Prefix_for_LibraryUseOnly_and_RenewablesAllowed .. t;
    end
    if GetFieldValue("Transaction", "LibraryUseOnly") and GetFieldValue("Transaction", "RenewalsAllowed") ~= true then
        tn = Settings.Prefix_for_LibraryUseOnly .. t;
    end
    if GetFieldValue("Transaction", "RenewalsAllowed") and GetFieldValue("Transaction", "LibraryUseOnly") ~= true then
        tn = Settings.Prefix_for_RenewablesAllowed .. t;
    end
    if GetFieldValue("Transaction", "LibraryUseOnly") ~= true and GetFieldValue("Transaction", "RenewalsAllowed") ~= true then
        tn = Settings.acceptItem_Transaction_Prefix .. t;
    end
end
else
    tn = Settings.acceptItem_Transaction_Prefix .. GetFieldValue("Transaction", "TransactionNumber");
end
```

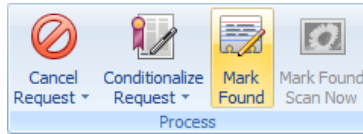
Lending: Configurable Transaction Field

```
local tn = "";
if Settings.checkInItem_UseItemNumber then
    tn = GetFieldValue("Transaction", "ItemNumber")
elseif Settings.checkInItem_UseTransactionNumber then
    tn = GetFieldValue("Transaction", "TransactionNumber");
else tn = GetFieldValue("Transaction", "TransactionNumber");
end
```

CheckInItem (Borrowing & Lending)

```
425 local cib = '';
426     cib = cib .. '<NCIPMessage version="http://www.niso.org/ncip/v1_0/impl/dtd/ncip_v1_0.dtd">'
427     cib = cib .. '<CheckInItem>'
428     cib = cib .. '<InitiationHeader>'
429     cib = cib .. '<FromAgencyId>'
430     cib = cib .. '<UniqueAgencyId>'
431     cib = cib .. '<Scheme>' .. Settings.checkInItem_from_uniqueAgency_scheme .. '</Scheme>'
432     cib = cib .. '<Value>' .. Settings.checkInItem_from_uniqueAgency_value .. '</Value>'
433     cib = cib .. '</UniqueAgencyId>'
434     cib = cib .. '</FromAgencyId>'
435     cib = cib .. '<ToAgencyId>'
436     cib = cib .. '<UniqueAgencyId>'
437     cib = cib .. '<Scheme>' .. Settings.checkInItem_to_uniqueAgency_scheme .. '</Scheme>'
438     cib = cib .. '<Value>' .. Settings.checkInItem_to_uniqueAgency_value .. '</Value>'
439     cib = cib .. '</UniqueAgencyId>'
440     cib = cib .. '</ToAgencyId>'
441     cib = cib .. '</InitiationHeader>'
442     cib = cib .. '<UniqueItemId>'
443     cib = cib .. '<UniqueAgencyId>'
444     cib = cib .. '<Scheme>' .. Settings.checkInItem_uniqueItem_agency_scheme .. '</Scheme>'
445     cib = cib .. '<Value>' .. Settings.checkInItem_uniqueItem_agency_value .. '</Value>'
446     cib = cib .. '</UniqueAgencyId>'
447     cib = cib .. '<ItemIdentifierValue>' .. tn .. '</ItemIdentifierValue>'
448     cib = cib .. '</UniqueItemId>'
449     cib = cib .. '</CheckInItem>'
450     cib = cib .. '</NCIPMessage>'
451     return cib;
452 end
```

XML: CheckOutItem Call



39 lines for the message

Easy Breakdown:

*From Unique Agency

*To Unique Agency

*Unique Agency ID

User Identifier Value (Pseudopatron Config)

Item Identifier Value (Reference Number)

*Unique Request ID

Request Identifier Value (Transaction Number)

Setting a Pseudopatron for Borrowers

- Do you want to use the OCLC Symbol for each Borrower?
- Do you want to prepend a string before the OCLC Symbol (e.g. "ILL-")?
- Do you want to just use "ILL" to indicate the Borrower?
- Do you want to use any name in the world to indicate the Borrower?

```
function buildCheckOutItem()  
local pseudopatron = "";  
if Settings.Use_Lender_String == true then  
    local OCLC_Sym = GetFieldValue("Transaction", "LendingLibrary");  
    pseudopatron = Settings.Borrower_Prepending_String .. OCLC_Sym;  
elseif Settings.Use_ILL_for_Library == true then  
    pseudopatron = "ILL";  
elseif Settings.BlanketName_for_Borrowing_Libraries ~= nil then  
    pseudopatron = Settings.BlanketName_for_Borrowing_Libraries;  
end
```



```
509 local coi = '';
510 coi = coi .. '<NCIPMessage version="http://www.niso.org/ncip/v1_0/impl/dtd/ncip_v1_0.dtd">'
511 coi = coi .. '<CheckOutItem>'
512 coi = coi .. '<InitiationHeader>'
513 coi = coi .. '<FromAgencyId>'
514 coi = coi .. '<UniqueAgencyId>'
515 coi = coi .. '<Scheme>' .. Settings.checkOutItem_from_uniqueAgency_scheme .. '</Scheme>'
516 coi = coi .. '<Value>' .. Settings.checkOutItem_from_uniqueAgency_value .. '</Value>'
517 coi = coi .. '</UniqueAgencyId>'
518 coi = coi .. '</FromAgencyId>'
519 coi = coi .. '<ToAgencyId>'
520 coi = coi .. '<UniqueAgencyId>'
521 coi = coi .. '<Scheme>' .. Settings.checkOutItem_to_uniqueAgency_scheme .. '</Scheme>'
522 coi = coi .. '<Value>' .. Settings.checkOutItem_to_uniqueAgency_value .. '</Value>'
523 coi = coi .. '</UniqueAgencyId>'
524 coi = coi .. '</ToAgencyId>'
525 coi = coi .. '</InitiationHeader>'
526 coi = coi .. '<UniqueUserId>'
527 coi = coi .. '<UniqueAgencyId>'
528 coi = coi .. '<Scheme>' .. Settings.checkOutItem_uniqueUser_agency_scheme .. '</Scheme>'
529 coi = coi .. '<Value>' .. Settings.checkOutItem_uniqueUser_agency_value .. '</Value>'
530 coi = coi .. '</UniqueAgencyId>'
531 coi = coi .. '<UserIdentifierValue>' .. pseudopatron .. '</UserIdentifierValue>'
532 coi = coi .. '</UniqueUserId>'
533 coi = coi .. '<UniqueItemId>'
534 coi = coi .. '<UniqueAgencyId>'
535 coi = coi .. '<Scheme>' .. Settings.checkOutItem_uniqueItem_agency_scheme .. '</Scheme>'
536 coi = coi .. '<Value>' .. Settings.checkOutItem_uniqueItem_agency_value .. '</Value>'
537 coi = coi .. '</UniqueAgencyId>'
538 coi = coi .. '<ItemIdentifierValue>' .. refnumber .. '</ItemIdentifierValue>'
539 coi = coi .. '</UniqueItemId>'
540 coi = coi .. '<UniqueRequestId>'
541 coi = coi .. '<UniqueAgencyId>'
542 coi = coi .. '<Scheme>' .. Settings.checkOutItem_uniqueRequest_agency_scheme .. '</Scheme>'
543 coi = coi .. '<Value>' .. Settings.checkOutItem_uniqueRequest_agency_value .. '</Value>'
544 coi = coi .. '</UniqueAgencyId>'
545 coi = coi .. '<RequestIdentifierValue>' .. tn .. '</RequestIdentifierValue>'
546 coi = coi .. '</UniqueRequestId>'
547 coi = coi .. '</CheckOutItem>'
548 coi = coi .. '</NCIPMessage>'
549 return coi;
```

Making Changes to the Addon



Don't use the Reset Cache button!
Make changes directly to the code.
Must close Client and re-open.

Setting Name	Value	Type
AutoSearch	<input checked="" type="checkbox"/>	boolean
EnableAbeBooks	<input checked="" type="checkbox"/>	boolean
EnableAbsoluteBackorderService	<input checked="" type="checkbox"/>	boolean
EnableAddall	<input checked="" type="checkbox"/>	boolean
EnableAlibris	<input type="checkbox"/>	boolean
EnableAmazon	<input type="checkbox"/>	boolean
EnableBarnesNoble	<input type="checkbox"/>	boolean
EnableBWB	<input checked="" type="checkbox"/>	boolean
EnableBookHouse	<input checked="" type="checkbox"/>	boolean
EnableBookmooch	<input checked="" type="checkbox"/>	boolean
EnableBUSCA	<input checked="" type="checkbox"/>	boolean
EnableCassalini	<input checked="" type="checkbox"/>	boolean
EnableFirstSearch	<input checked="" type="checkbox"/>	boolean
EnableGOBI	<input checked="" type="checkbox"/>	boolean
EnableHulu	<input checked="" type="checkbox"/>	boolean
EnableIMDb	<input checked="" type="checkbox"/>	boolean
EnableIngram	<input checked="" type="checkbox"/>	boolean
EnableMidwestTape	<input checked="" type="checkbox"/>	boolean
EnableOaister	<input checked="" type="checkbox"/>	boolean
EnablePaperbackswap	<input checked="" type="checkbox"/>	boolean
EnableRottenTomatoes	<input checked="" type="checkbox"/>	boolean
EnableSwapaCD	<input checked="" type="checkbox"/>	boolean
EnableSwapADVD	<input checked="" type="checkbox"/>	boolean

Don't set anything
under Manage Addons!
These changes are only stored
locally and sometimes don't work!

Breakdown of the Function: Without Debug

```
function BorrowingAcceptItem(transactionProcessedEventArgs)
    luanet.load_assembly("System");
    local ncipAddress = Settings.NCIP_Responder_URL;
    local BAImessage = buildAcceptItem();
    local WebClient = luanet.import_type("System.Net.WebClient");
    local myWebClient = WebClient();
    myWebClient.Headers.Add("Content-Type", "text/html; charset=UTF-8");
    local BAIResponseArray = myWebClient:UploadString(ncipAddress, BAImessage);
    local currentTN = GetFieldValue("Transaction", "TransactionNumber");

    if string.find(BAIResponseArray, "Problem") then
        ExecuteCommand("Route", {currentTN, Settings. BorrowingAcceptItemFailQueue});
        ExecuteCommand("AddNote", {currentTN, LCIIResponseArray});
        SaveDataSource("Transaction");

    else
        ExecuteCommand("AddNote", {currentTN, "NCIP Response for BorrowingAcceptItem
            received successfully"});
        SaveDataSource("Transaction");
    end
end
```

Breakdown of the Function: With Debug

```
function BorrowingAcceptItem(transactionProcessedEventArgs)
```

```
    LogDebug("BorrowingAcceptItem - start");
```

```
    luanet.load_assembly("System");
```

```
    local ncipAddress = Settings.NCIP_Responder_URL;
```

```
    local BAImessage = buildAcceptItem();
```

```
    LogDebug("creating BorrowingAcceptItem message[" .. BAImessage .. "]);
```

```
    local WebClient = luanet.import_type("System.Net.WebClient");
```

```
    local myWebClient = WebClient();
```

```
    LogDebug("WebClient Created");
```

```
    LogDebug("Adding Header");
```

```
    myWebClient.Headers:Add("Content-Type", "text/html; charset=UTF-8");
```

```
    LogDebug("Setting Upload String");
```

```
    local BAImessageArray = myWebClient:UploadString(ncipAddress, BAImessage);
```

```
    LogDebug("Upload response was[" .. BAImessageArray .. "]);
```

```
    LogDebug("Starting error catch")
```

```
    local currentTN = GetFieldValue("Transaction", "TransactionNumber");
```

Client Log

```
/*-----BorrowingCheckInItem-----*/
2014-03-13 12:46:23,451 DEBUG AtlasSystems.Scripting.LuaApi.ScriptEnvironmentBase - creating BorrowingCheckInItem message[<NCIPMessage
version="http://www.niso.org/ncip/v1_0/imp1/dtd/ncip_v1_0.dtd"><CheckInItem><InitiationHeader><FromAgencyId><UniqueAgencyId><Scheme></Schem
e><Value>BD</Value></UniqueAgencyId></FromAgencyId><ToAgencyId><UniqueAgencyId><Scheme></Scheme><Value>RLS</Value></UniqueAgencyId></T
oAgencyId></InitiationHeader><UniqueItemId><UniqueAgencyId><Scheme></Scheme><Value>RLS</Value></UniqueAgencyId><ItemIdentifierValue>TN-
4076285</ItemIdentifierValue></UniqueItemId></CheckInItem></NCIPMessage>]
2014-03-13 12:46:23,451 DEBUG >> AtlasSystems.Scripting.LuaApi.ScriptEnvironmentBase - WebClient Created
2014-03-13 12:46:23,451 DEBUG >> AtlasSystems.Scripting.LuaApi.ScriptEnvironmentBase - Adding Header
2014-03-13 12:46:23,467 DEBUG >> AtlasSystems.Scripting.LuaApi.ScriptEnvironmentBase - Setting Upload String

2014-03-13 12:46:23,576 DEBUG >> AtlasSystems.Scripting.LuaApi.ScriptEnvironmentBase - Upload response was[<?xml version = "1.0" encoding = "UTF-8"?>
>> <!DOCTYPE NCIPMessage PUBLIC "-//NISO//NCIP DTD Version 1//EN" >> "http://www.niso.org/ncip/v1_0/imp1/dtd/ncip_v1_0.dtd"> >> <NCIPMessage
version="http://www.niso.org/ncip/v1_0/imp1/dtd/ncip_v1_0.dtd"> <CheckInItemResponse><ResponseHeader><FromAgencyId>
<UniqueAgencyId><Scheme></Scheme><Value>RLS</Value></UniqueAgencyId></FromAgencyId><ToAgencyId><UniqueAgencyId><Scheme></Scheme><
Value>BD</Value></UniqueAgencyId></ToAgencyId></ResponseHeader><UniqueItemId><UniqueAgencyId><Scheme>NCIP Unique Agency Id
</Scheme><Value>Relais Items Agency</Value></UniqueAgencyId><ItemIdentifierValue>TN-4076285</ItemIdentifierValue></UniqueItemId>
<UniqueUserId><UniqueAgencyId><Scheme>NCIP Unique Agency Id</Scheme><Value>Relais Users Agency</Value></UniqueAgencyId>
<UserIdentifierValue>KSG</UserIdentifierValue></UniqueUserId><RoutingInformation><RoutingInstructions>No special Instructions</RoutingInstructions>
<Destination><Location><LocationType><Scheme>NCIP Location Type Scheme</Scheme><Value>Permanent</Value></LocationType>
<LocationName><LocationNameInstance><LocationNameLevel>1</LocationNameLevel><LocationNameValue>Interlibrary Loan</LocationNameValue>
</LocationNameInstance><LocationNameInstance><LocationNameLevel>2</LocationNameLevel><LocationNameValue>NCIP</LocationNameValue>
</LocationNameInstance><LocationNameInstance><LocationNameLevel>3</LocationNameLevel><LocationNameValue>TN-4076285</LocationNameValue>
</LocationNameInstance></LocationName></Location></Destination></RoutingInformation><UserOptionalFields><VisibleUserId><UniqueAgencyId><Schem
e>NCIP Unique Agency Id</Scheme><Value>Relais Users Agency</Value></UniqueAgencyId><VisibleUserIdentifierType><Scheme>NCIP Visible User Identifier
Type Scheme</Scheme><Value>Institution Id Number</Value></VisibleUserIdentifierType><VisibleUserIdentifier>KSG</VisibleUserIdentifier>
</VisibleUserId></UserOptionalFields></CheckInItemResponse></NCIPMessage>]

2014-03-13 12:46:23,576 DEBUG >> AtlasSystems.Scripting.LuaApi.ScriptEnvironmentBase - Starting error catch
2014-03-13 12:46:23,576 DEBUG >> AtlasSystems.Scripting.DataObjects.ScriptingDataContext - Attempting to retrieve field value.
2014-03-13 12:46:23,576 DEBUG >> AtlasSystems.Scripting.DataObjects.ScriptIndexedObjectWrapper - >> Attempting to get the value of TransactionNumber
on an object of type Transaction
2014-03-13 12:46:23,576 DEBUG >> AtlasSystems.Scripting.DataObjects.ScriptIndexedObjectWrapper - Value obtained: 4076285 Type: Int32
2014-03-13 12:46:23,576 DEBUG >> AtlasSystems.Scripting.LuaApi.ScriptEnvironmentBase - No Problems found in NCIP Response.
2014-03-13 12:46:23,576 DEBUG >> AtlasSystems.Scripting.LuaApi.ScriptEnvironmentBase - ExecuteCommand called.
2014-03-13 12:46:23,576 DEBUG >> AtlasSystems.Scripting.LuaApi.ScriptEnvironmentBase - Parsing arguments.
2014-03-13 12:46:23,576 DEBUG AtlasSystems.ILLiad.Transaction - Adding >> note for transaction 4076285
```

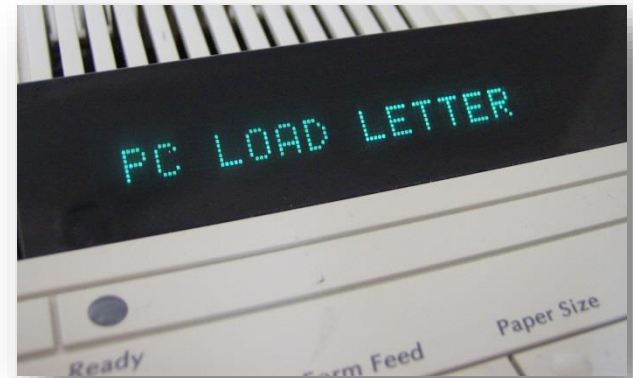
Problem Queues

Generic Problem Queues (Configurable Names):

- BorrowingAcceptItemFailQueue
- BorrowingCheckInItemFailQueue
- LendingCheckOutItemFailQueue
- LendingCheckInItemFailQueue

Growing List of Queues:

- BorrowingAccept: Item Not Checked Out
- BorrowingAccept : User Authentication Failed
- BorrowingAccept : Service is not known (unicode characters)
- BorrowingCheckIn: Unknown Item
- BorrowingCheckIn: Item Not Checked Out
- LendingCheckOut: No change in due date
- LendingCheckOut: User Ineligible To Check Out This Item
- LendingCheckOut: User Unknown
- LendingCheckIn: Unknown Item
- LendingCheckIn: Item Not Checked Out



This list may grow in the future (hopefully not)!

There are 7 pages with 57 errors!

The errors are not very useful!

Special Characters

Error! “Unknown Service” ???

Solution: Atlas Helpers URL encode:

Change this:

```
<NCIPMessage version="http://www.niso.org/ncip/v1_0/imp1/dtd/ncip_v1_0.dtd"><AcceptItem><InitiationHeader>
<FromAgencyId><UniqueAgencyId><Scheme></Scheme><Value>BD</Value></UniqueAgencyId></FromAgencyId><ToAgencyId><UniqueAgencyId><Scheme></Scheme><Value>WID</Value></UniqueAgencyId></ToAgencyId></InitiationHeader><UniqueRequestId><UniqueAgencyId><Scheme></Scheme><Value>BD</Value></UniqueAgencyId><RequestIdentifierValue>TN-4176020</RequestIdentifierValue></UniqueRequestId><RequestedActionType>
<Scheme>http://www.niso.org/ncip/v1_0/imp1/schemes/requestedactiontype/requestedactiontype.scm</Scheme><Value>Hold for
Pickup</Value></RequestedActionType><UniqueUserId><UniqueAgencyId><Scheme></Scheme><Value>RLS</Value></UniqueAgencyId><UserIdentifierValue>60885516</UserIdentifierValue></UniqueUserId><UniqueItemId><UniqueAgencyId><Scheme></Scheme><Value>BD</Value></UniqueAgencyId><ItemIdentifierValue>TN-4176020</ItemIdentifierValue></UniqueItemId><ItemOptionalFields><BibliographicDescription><Author>Göhner,
Dietmar</Author><Title>Beiträge zur Kenntnis des südalpinen Juras mit besonderer Berücksichtigung
der unterjurassischen Lithiotis-Fazies </Title></BibliographicDescription></ItemOptionalFields></AcceptItem></NCIPMessage>
```

To this:

```
[%3CNCIPMessage+version%3D%22http%3A%2F%2Fwww%2Eniso%2Eorg%2Fncip%2Fv1%5F0%2Fimp1%2Fdtd%2Fncip%5Fv1%5F0%2Edtd%22%3E
%3CAcceptItem%3E%3CInitiationHeader%3E%3CFromAgencyId%3E%3CUniqueAgencyId%3E%3CScheme%3E%3C%2FScheme%3E%3CValue%3EBD
%3C%2FValue%3E%3C%2FUniqueAgencyId%3E%3C%2FFromAgencyId%3E%3CToAgencyId%3E%3CUniqueAgencyId%3E%3CScheme%3E%3C%2FSch
eme%3E%3CValue%3EWID%3C%2FValue%3E%3C%2FUniqueAgencyId%3E%3C%2FToAgencyId%3E%3C%2FInitiationHeader%3E%3CUniqueRequestI
d%3E%3CUniqueAgencyId%3E%3CScheme%3E%3C%2FScheme%3E%3CValue%3EBD%3C%2FValue%3E%3C%2FUniqueAgencyId%3E%3CRequestIde
ntifierValue%3ETN%2D4176020%3C%2FRequestIdentifierValue%3E%3C%2FUniqueRequestId%3E%3CRequestedActionType%3E%3CScheme%3Ehtt
p%3A%2F%2Fwww%2Eniso%2Eorg%2Fncip%2Fv1%5F0%2Fimp1%2Fschemes%2Frequestedactiontype%2Frequestedactiontype%2Escm%3C%2FSch
eme%3E%3CValue%3EHold+for+Pickup%3C%2FValue%3E%3C%2FRequestedActionType%3E%3CUniqueUserId%3E%3CUniqueAgencyId%3E%3CSch
eme%3E%3C%2FScheme%3E%3CValue%3ERLS%3C%2FValue%3E%3C%2FUniqueAgencyId%3E%3CUserIdentifierValue%3E60885516%3C%2FUserId
entifierValue%3E%3C%2FUniqueUserId%3E%3CUniqueItemId%3E%3CUniqueAgencyId%3E%3CScheme%3E%3C%2FScheme%3E%3CValue%3EBD%3
C%2FValue%3E%3C%2FUniqueAgencyId%3E%3CItemIdentifierValue%3ETN%2D4176020%3C%2FItemIdentifierValue%3E%3C%2FUniqueItemId%3E
%3CItemOptionalFields%3E%3CBibliographicDescription%3E%3CAuthor%3EGo%CC%88hner%2C+Dietmar%3C%2FAuthor%3E%3CTitle%3EBeitra%
C%88ge+zur+Kenntnis+des+su%CC%88dalpinen+Juras+mit+besonderer+beru%CC%88cksichtigung+der+unterjurassischen+Lithiotis%2DFazies+%3C
%2FTitle%3E%3C%2FBibliographicDescription%3E%3C%2FItemOptionalFields%3E%3C%2FAcceptItem%3E%3C%2FNCIPMessage%3E]
```

Assessment

- Beta period – June 2 – July 7
- Survey planned
- Feedback
 - Patrons
 - Staff

A few issues

- Aleph upgrade planned same weekend
 - Aleph v20 testing failed – security certificates
 - Aleph v22 upgrade failed – beta test delayed
- In-Library-Use Only workflow a little tricky
- A few bugs/tweaks along the way
 - Checking in articles created an item record in Aleph
 - Unicode
 - Returns would always result in an error because they are never charged out
- Lending implementation delayed
 - Waiting to establish patron database in Aleph