



18th Annual CODI Conference  
Pittsburgh Pennsylvania

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# Implementing *Overnight Authorities* from MARCIVE on Horizon 7.3.4

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Hennepin County (MN) Library

## Hennepin County Library background

- 300,000 bib records; 35,000 new titles annually
- Complete catalog record replacement in 2002
  - Bring database into compliance with MARC and ISBD/AACR2 standards, LCSH
- Manual authority maintenance
  - Lists of new authorities
  - Fix as you find
  - Complaints/comments from staff and public
- Acquisitions staff required to do "authority work" on authors in order records

## Hennepin County Library background

- Catalogers were importing authority records along with bib records from OCLC
- Initial project with MARCIVE to clean up existing bib and authority records and create an authority backfile
  - Extensive profile developed
  - Sent MARCIVE all 300,000 bib records for authority processing
  - Received back 50,000 updated bibles and 262,000 authority records
  - Records loaded into Horizon
    - Match point for bib overlay was Horizon bib number
    - Text matching for authority overlay, otherwise create new

## Overnight Authorities Overview

- New and updated *bibliographic* records are exported and sent via FTP to MARCIVE for processing
- MARCIVE compares the headings in the incoming records to their authority files
- Bib records with invalid headings are upgraded
- MARCIVE returns two files of records
  - upgraded bibliographic records
  - authority records for the headings analyzed (if needed)
- Returned records are downloaded via FTP and imported into Horizon

## Identifying bib records to export and send

- Special table in Horizon database: **hcl\_bibs\_to\_marcive**
  - Only one column: **bib#**  
`create table hcl_bibs_to_marcive (bib# int)`
- Use SQL to identify which bibs should be sent to MARCIVE and populate **hcl\_bibs\_to\_marcive** with their bib numbers
- Criteria for inclusion
  - Added or modified
    - Both new and modified records are sent
  - Batch frequency, added or modified date
    - We send records daily
  - Type of record
    - We don't send ILL, Fast add, or Order records

## SQL for Identifying Bibs

```
truncate table hcl_bibs_to_marcive
```

```
insert hcl_bibs_to_marcive(bib#)
```

```
select bib# from bib_control
```

```
where (
```

```
create_date = datediff(dd, '1/1/1970', getdate()) or  
(change_date = datediff(dd, '1/1/1970', getdate()) and  
change_user != 'marcive')
```

```
)
```

```
and bib# not in (
```

```
select distinct(bib#) from bib  
where  
(tag = '949' and substring(text, 18, 5) = 'czill')  
or tag = '970'
```

```
)
```

Created or modified today

Filter out crappy little records

## Exporting the bibs

- **marcout.exe**
  - Windows command line utility available on the support website  
<http://customer.dynix.com/support/downloads/index.asp>
  - Version specific
  - Requires lots of arguments (switches)
  - Type "**marcout** /?" to get the full list

## marcout.exe switches

- /s** server
- /p** password
- /u** db user
- /d** database
- /m** MARC output file
- /b** beginning record (1 = first record)
- /e** ending record (0 = last record)
- /t** table containing bib numbers to export
- /x** export target
- /y** include bibs with no items
- /q** put bib# in this tag, subfield a
- /@** db client type (s = Sybase, m = MSSQL)

## marcout.exe switches

Database client connection

`/shennepin /p***** /uhzadmin /dhorizon`

MARC Output File - path and filename

`/mmarcive_out.mrc` (filename only)

`/m\outfiles\marcive_out.mrc` (path, filename)

`/mp:\outfiles\marcive_out.mrc` (drive, path, filename)

`/m"p:\marcive outfiles\20071015.mrc"` (space requires quotes)

Beginning/Ending record ID number - include all records

`/b1 /e0`

Horizon table containing bib numbers to export

`/thcl_bibs_to_marcive`

## marcout.exe switches

Export target - create blank record called "none" in `export_target` using table editor

`/xnone`

Include bibs with no items - must use "Yes" switch if export target is

`none`

`/y`

Put bib# in specified tag, subfield a

`/q999`

- Serves as the match point for importing updated bibs from MARCIVE
- Strips all instances of this tag before adding

Database client type - Sybase assumed; only required if using MSSQL

`/@mssql`

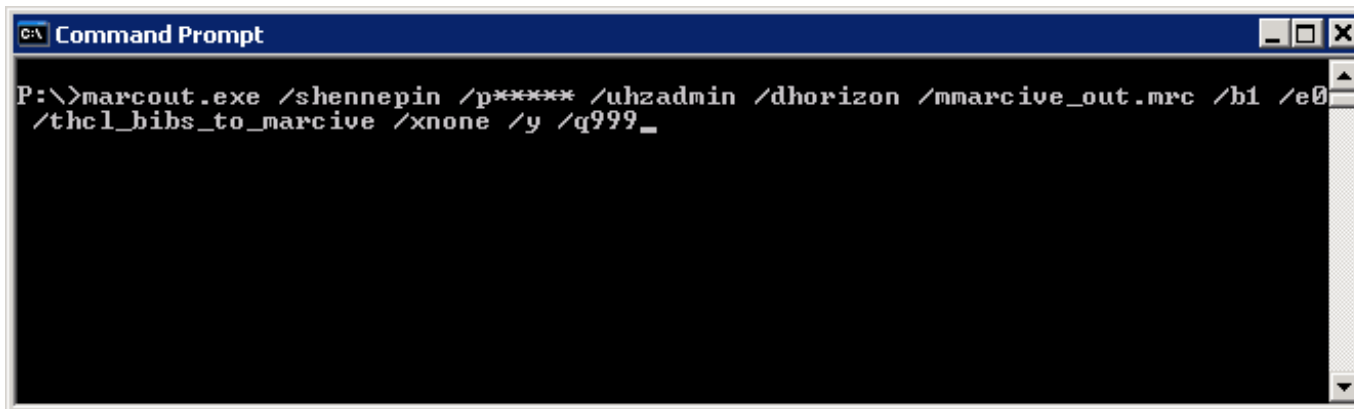
## marcout.exe switches

- Switches can be upper or lower case  
`/thcl_bibs_to_marcive`  
`/Thcl_bibs_to_marcive`
- Space ok but not required between switch letter and switch value  
`/thcl_bibs_to_marcive`  
`/t hcl_bibs_to_marcive`
- Space ok but not required between switches  
`/sHennepin /p***** /uhzadmin /dhorizon`  
`/sHennepin/p*****/uhzadmin/dhorizon`
- Close the Horizon client before running command line utilities

## marcout.exe switches

- Here's the whole thing:

```
marcout.exe /shennepin /p***** /uhzadmin /dhorizon  
/mmarcive_out.mrc /b1 /e0 /thcl_bibs_to_marcive /xnone  
/y /q999
```



```
C:\> Command Prompt  
P:\>\marcout.exe /shennepin /p***** /uhzadmin /dhorizon /mmarcive_out.mrc /b1 /e0  
/thcl_bibs_to_marcive /xnone /y /q999_
```

- FTP file of records to MARCIVE
- Email MARCIVE with file statistics

## Importing Bibs and Authorities - An Overview

- Updated Bib records
  - About 10% of records sent come back with changes
  - Incoming records retain Horizon bib# in tag 999±a
  - 100% overlay expected
- New Authority records
  - About 100 per daily batch
  - Primary match point is LC authority number in 010±a, text match is secondary
  - Overlay system-generated authorities or create new

## import\_source

- We use the same import\_source record for loading bibs and authorities, [marcive](#)



**Edit: Import Source**

\* Import Source

Description

Create Items  No  For New Bibs Only  For New Or Matched Bibs

Default Owner  *Unowned*

Bib Match Points    1 of 1

\* Ord

Match Type  Match based on Horizon Index  Match based on Horizon Bib#

mq index

Tag where Bib# is found

Subfield where Bib# is found

Authority Match Points    1 of 1

\* Ord

Match Type  Match based on Horizon Index  Match based on Horizon Auth#

mq index  *(Auth) LCCN Exact Match*

Tag where Auth# is found

Subfield where Auth# is found

Match Point match is sufficient for auth delete

Match Point match is sufficient for auth replace

\* Character to indicate decimal

## Importing the Authorities

- marcin.exe
  - Windows command line utility available on the support website  
<http://customer.dynix.com/support/downloads/index.asp>
  - Version specific
  - Requires lots of arguments (switches)
  - Type "**marcin** /?" to get the full list

## marcin switches for Auth import

- /s /p /u /d Database connection
- /l Horizon location
- /r Horizon user
- /f MARC input file
- /b beginning record (1 = first record)
- /e ending record (0 = last record)
- /q import source
- /o overlay option
- /j force incoming records to be treated as authorities
- /1 overlay auth when new Use Code validated
- /2 overlay auth when new Use Code invalidated
- /3 create new auth when when existing not overlaid
- /t logfile – create a file with load summary
- /@ db client type (s = Sybase, m = MSSQL)



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## marcin switches for Auth import

Horizon location - used for statistics

`/lts`

Horizon user - used for `create_user` or `change_user`

`/lmarcive`

MARC Input File - path and filename

`/fHECAALL.371` (filename only)

`/f\infile\HECAALL.371` (path, filename)

Beginning/Ending record - include all records

`/b1 /e0`

Horizon import\_source

`/qmarcive`

Overlay option - overlay unconditionally

`/o2`

## marcin switches for Auth import

Force incoming records to be treated as authority records

`/j`

Overlay authority record when new Use Code validated - Always overlay

`/1A`

Overlay authority record when new Use Code invalidated - Always overlay

`/2A`

Create new authority when existing not overlaid - Yes

`/3Y`

Logfile - path and filename

`/tmarcin_auth_results.txt`

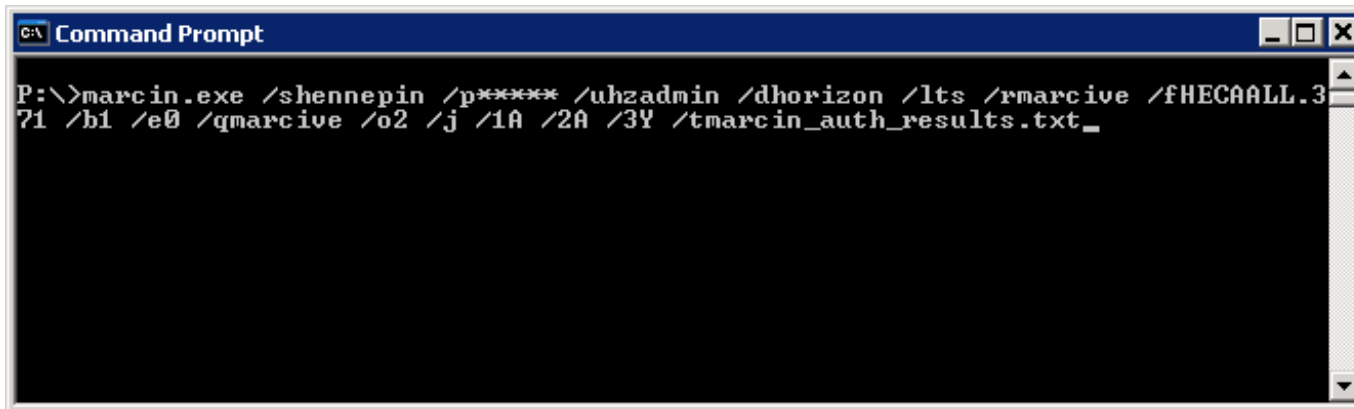
Database client type - Sybase assumed; only required if using MSSQL

`/@mssql`

## marcin switches for Auth import

- Here's the whole thing:

```
marcin.exe /shennepin /p***** /uhzadmin /dhorizon /lts  
/rmarcive /fHECAALL.371 /b1 /e0 /qmarcive /o2 /j /1A  
/2A /3Y /tmarcin_auth_results.txt
```



```
C:\> Command Prompt  
P:\>\marcin.exe /shennepin /p***** /uhzadmin /dhorizon /lts /rmarcive /fHECAALL.3  
71 /b1 /e0 /qmarcive /o2 /j /1A /2A /3Y /tmarcin_auth_results.txt_
```

**Multi-Format Import** [X]

Import File  /f

Import Source  /q

Overlay Bibs  Never  Always  If newer than local date  If newer than Marc date

Overlay Auths  Never  Always  If newer than local date  If newer than Marc date

Overlay if new auth Use Code validated  Never  Always  If system generated Log to manual review  /1

Overlay if auth Use Code invalidated  Never  Always  If system generated Log to manual review  /2

Create new bib if not overlaid  Create new auth if not overlaid  /3

Overlay Items  Never  Always

Delete Items  Never  Always

New Bib Status

Bib Overlay Change Status

New Auth Status

Auth Overlay Change Status

New Bib Staff Only  New Auth Staff Only

Selection

Owner

Start process at   AM  PM Start process on (Date)

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## marcin results for Auth import

```
Records processed: 212
Bibs added:      0
Bibs overlaid:   0
Bibs deleted:    0
Auths added:     59
Auths overlaid:  152
Auths deleted:   0
Items added:     0
Items overlaid:  0
Items deleted:   0
Copies added:    0
Bib Links created 0
Bib errors:      0
Auth errors:     1
Item errors:     0
Item link errors: 0
Copy errors:     0
Check the 'mistrake' table (batch# 4400) for error messages!
```

## Importing the Bibs - marcin.exe again

- /s /p /u /d** Database connection
- /l** Horizon location
- /r** Horizon user
- /f** MARC input file
- /b** beginning record (1 = first record)
- /e** ending record (0 = last record)
- /q** import source
- /o** overlay option
- /t** logfile - writes out counts here at the end
- /@** db client type (s = Sybase, m = MSSQL)

## marcin switches for Bib import

Overlay option - overlay unconditionally ONLY (don't create new records)

/o3

Here's the whole thing:

```
marcin.exe /shennepin /p***** /shzadmin /dhorizon /lts  
/rmarcive /fHECABIB.375 /b1 /e0 /qmarcive /o3  
/tmarcin_bib_results.txt
```



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## marcin results for Bib import

Records processed:	24
Bibs added:	0
Bibs overlaid:	24
Bibs deleted:	0
Auths added:	0
Auths overlaid:	0
Auths deleted:	0
Items added:	0
Items overlaid:	0
Items deleted:	0
Copies added:	0
Bib Links created	0
Bib errors:	0
Auth errors:	0
Item errors:	0
Item link errors:	0
Copy errors:	0

## Tricks and Tips

- Identifying bibs to send
  - Newly added
    - Don't send records for Fast Adds, ILLs, puppets, "general title records", etc.
    - Order records?
  - Updated
    - Basic HCL workflow in cataloging overlays existing order record so updated records must be sent
    - Updating an authority record will also "update" all the bibs that use it
    - DON'T send records that were updated by the MARCIVE process (endless loop)
      - Create a special Horizon user ([marcive](#))
      - Used for importing MARCIVE files via [marcin.exe](#)
      - Used by catalogers working on authority projects

## Tricks and Tips

- Sequence of steps
  - Really there are two independent processes going on
    - Every day you are sending new/updated bibs from TODAY
    - Every day you are receiving updated bibs and authorities from a batch sent previously
  - I don't try to connect the records MARCIVE sends back to the original batch that I sent out the day before
    - The program runs every day with Day End, whether it needs to or not
    - Each process (send and receive) is handled independently and neither has a problem if there's nothing to do (Sat, Sun, Holidays)
  - Always identify new and updated bibs **before** you load the authorities from a previous batch

## Authority Load Errors

1. Rec#: 87, Data in match points in existing auth 140282 does not match.
  - No primary match (010)
  - Heading text in incoming record matches an existing authority, but there is a 010 *mismatch*
  - marcin does NOT overlay the existing record
  - cataloging staff investigates and fixes manually

### Incoming Authority Record

010 \$ano2007111355  
035 \$a(OCOLC) oca07529286  
040 \$aMsU\$beng\$cMsU  
100 1 \$a**Minato, Tamotsu**  
670 \$aOnibaba, 1964 :\$bcredits (Tamotsu Minato,  
producer)

1. LCCN doesn't have  
a match in Horizon

2. Headings are a text  
match

### Existing Horizon Authority Record

010 \$an 83072533  
040 \$aDLC\$cDLC  
100 1 \$a**Minato, Tamotsu**  
670 \$aKodai Kibi no kento, 1982 (a.e.)\$bp. 1  
(Minato Tetsuo; w. Tsuyama-shi Kyoiku Iinkai)  
670 \$aNDL choshamei, 1979, suppl., 1981.

3. But, LCCNs don't  
match

## Authority Load Errors

2. Rec#: 96, Could not invalidate use code(s) 'Series' for Auth# 905792 because bibs were attached.
  - Primary match on LCCN
  - Existing Horizon authority has less restrictive use codes than the incoming authority
  - There are bibs using the existing authority record in a way that would be cut off by the more restrictive incoming authority record
  - marcin DOES overlay the existing record but maintains the use codes from the existing authority

### Incoming Authority Record

```
000 00617cz 2200157n 4500
001 n 2006089197
003 DLC
005 20070607034644.0
008 070606n| acann aabr |a aaa |||
010 $an 2006089197
```

**3. Use Codes of incoming record allow use as Name, Subject, but not Series**

### Existing Horizon Authority Record

```
000 00745cz 2200181n 4500
001 n 2006089197
003 DLC
005 20070607094300.0
008 070606n| acann aaan |a aaa |||
010 $an 2006089197
```

**1. Primary match on LCCN**

**2. Use Codes of existing record allow use as Name, Subject, and Series**

## Authority Load Errors

3. Rec#: 1, Auth 41763 was found using match points, but the headings did not match.
- Primary match on LCCN
  - Headings do not match
  - Leader of incoming record has a Record Status of **n** (new)
  - marcin does NOT overlay the existing record
  - Solution: MARCIVE can send authority records that always have a Record Status of **c** (corrected or revised)

### Incoming Authority Record

000 00468n 2200121n 4500  
010 \$an 2002062637  
040 \$aDLC\$beng\$cDLC  
100 1 \$aMikos, Kenneth

### Existing Horizon Authority Record

000 00462nz 2200121n 4500  
010 \$an 2002062637  
040 \$aDLC\$beng\$cDLC  
100 1 \$aMikos, Ken

**3. Record Status indicates a new record**

**1. Primary match on LCCN**

**2. Headings do NOT match**

## Running the Whole Process through Day End

- Custom Day End program written in Perl
  - Can be run from the command line
  - Can call SirsiDynix command line utilities (marcin, marcout)
  - Perl has modules for:
    - interacting with Horizon database using SQL
    - manipulating and processing MARC records
    - FTP send and receive
    - Sending email
- Program starts at about 4:00 am, one of the last Day End processes
- Program creates entries in the Day End Activity Log

## Day End Program Steps

### Part 1 - Outgoing bibs

1. Find bibs added or updated yesterday, add bib numbers to `hcl_bibs_to_marcive` table
2. Export bibs using `marcout.exe` to a local file
3. Analyze local bib file, remove any bibs without tags under authority control
4. FTP bib file to MARCIVE
5. Send notification email to MARCIVE

## Day End Program Steps

### Part 2 - Incoming Authorities and Bibs from previous Day End

6. FTP new authorities, bibs and reports from MARCIVE
7. Import authorities using [marcin.exe](#)
  - If there are errors, pull the info out of [mistrake](#) and copy the record(s) in question from the authority import file
8. Check each incoming bib record against Horizon to determine if it has been changed in the past 24 hours
  - If so, don't import it
9. Import bibs using [marcin.exe](#)
10. Send email summary to cataloging staff with reports and problem records as attachments

## Day End Activity Log

**List: Day End Activity**

Activity	Date	Time	Program	Done	Total	Error
1. Starting DEMrcve: Day End MARCIVE Overnight Authorities, program: DEmrcve.bat	10/20/07	04:56AM	DEmrcve	0	0	
2. Export and transfer bibs to MARCIVE for overnight processing	10/20/07	04:57AM	DEmrcve	360	360	
3. Transfer and import bib records from MARCIVE	10/20/07	04:58AM	DEmrcve	13	13	
4. Transfer and import authority records from MARCIVE	10/20/07	04:58AM	DEmrcve	85	85	

Selection  Total: 4

## Day End Email Summary

**MARCIVE summary for 10/23/2007 (1 error) - Message (Plain Text)**

File Edit View Insert Format Tools Actions Help Type a question for help

Reply Reply to All Forward

From: MARCIVE Daily Maintenance [marcive@hclib.org] Sent: Tue 10/23/2007 5:26 AM  
To: Markham, Scott; Wogen, Anne  
Cc: Feilmeyer, Phil  
Subject: MARCIVE summary for 10/23/2007 (1 error)

Attachments: mistrake\_1.mrc (557 B); mistrake\_1.txt (137 B); modified\_headings\_2007\_10\_23.xls (11 KB)

MARCIVE Automatic Maintenance summary for 10/23/2007

133 new and updated bibs exported and FTPed to MARCIVE

116 authority records loaded from file HECAALL.381  
1 ERRORS, CHECK MISTRAKE ATTACHMENTS

89 bib records loaded from file HECABIB.380 (no errors)



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Slides: [www.hclib.org/extranet](http://www.hclib.org/extranet)