

*"Primo is broken, can you fix it?"*  
Converting anecdotal evidence into  
e-resource access solutions

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# CQUniversity

- Main campus - Rockhampton, Queensland
- 11 campuses in Queensland and 4 in other states (Melbourne, Sydney, Perth and Adelaide) plus several Study Centre/Hubs
- Over 30,000 students
- 16,000 studying on campus
- 13,000 studying via distance education
- VET, Undergraduate, Postgraduate and Research Higher Degree courses



# CQUniversity Library

- Libraries at 14 campuses with main library at Rockhampton North
- Combined Library and IT service
- Implemented Ex Libris Alma and Primo in late 2016
- Implementation faster than Ex Libris' 'Fast' offering
- Implemented Leganto in 2018
- EZproxy and ADFS for authentication



# Introduction

- The problem
- Contributing factors
- The approach
- Errors and major issues
- Statistics
- EBSCO in-depth
- 'No full text available' error
- Conclusion/outcome

# The problem

- Alma/Primo implemented quickly in late 2016
- Anecdotal reports of broken links in Primo during 2017, particularly off-campus EBSCO links
- Limited staff resources to optimise use of Alma/Primo and troubleshoot issues
- New Digital Access Specialist position created in 2018
- Main priority - identify and fix electronic resource access problems

# Disclaimer

- Not intended to make Ex Libris or EBSCO look bad
- Unforeseen issues resulting from a configuration choice made by CQU
- Both companies have gone above and beyond to help resolve issues

# Contributing factors

- Fast implementation of Alma/Primo
- Limited staff resources
- EBSCOhost database authentication moved from EZproxy to SSO

# Approach

- Sought linking problem examples from library staff
- Devised a plan for resolving issues including:
  - Systematic check of P2E records from Virtua (4232 portfolios)
  - Check of all parsers in Alma (particularly EBSCO parsers)
  - Check static URLs are correct (particularly EBSCO static URLs)
  - Sample check of collection and portfolio service linking configuration (in particular whether EZproxy is enabled or not, with initial focus on EBSCO)
  - Check stanzas in the EZproxy configuration file



# Cause of errors

- Incorrect metadata in Primo Central Index (PCI)
- Incorrectly configured parsers in Alma
- Errors in electronic service linking configuration
  - generic static URLs for EBSCO resources
  - EZproxy enabled for EBSCO resources
- Electronic resources not configured or configured incorrectly in EZproxy
- Limitations of EBSCO link resolver (requires vol & issue number)
- Incorrect metadata in the target databases
- Insufficient metadata in a PCI records
- Incorrect coverage dates or volume/issue numbers in Alma
- Links not proxied in Primo
- Incorrect availability

# Major problems found

- **EBSCOhost links**
  - Alma parsers
  - Static URLs
  - EBSCO Link Resolver Plugin
  - EBSCO's link resolver
  - Dynamic URL
- EZproxy not enabled on some collections/portfolios
- EZproxy config.txt stanzas not maintained
- Standalone portfolios from Virtua - Static URLs not maintained
- 'No full text available' error in Primo

# Some statistics

- 15,000 Kanopy standalone portfolios not proxied - moved to collection
- Approx. 2500 other standalone not proxied - came from old library system
- 10 collections not proxied
- 2 collections needed to be deactivated
- 1 collection with 2019 portfolios we didn't subscribe to
- 2 collections with incorrect parser parameters
- EZproxy stanzas reduced from 260 to 95 (63% ↓)
- EZproxy config file reduced by 700 lines (24% ↓)
- All 22 EBSCOhost collections had major issues

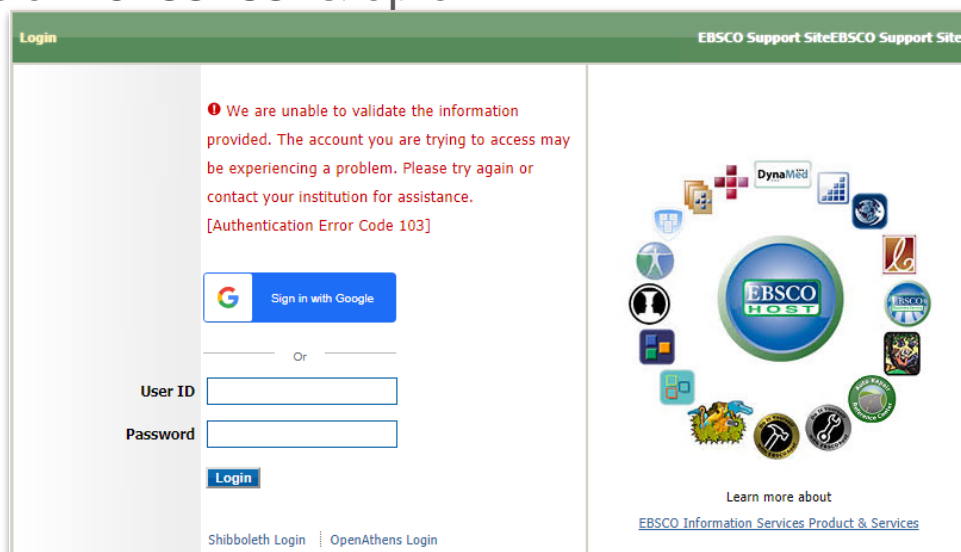
# The EBSCO Saga

- Late 2017 moved EBSCOhost from EZproxy to SSO
- Students no longer needed to login again to access personalised EBSCO account

# EBSCO link parameters and off-campus users

EBSCOhost link generated by Alma:

<https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=bsu&AN=95750557&msid=201334637&ldpld=>



Link that correctly redirects to CQU login page:

<https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=bsu&auth type=sso&custid=s3716178&AN=95750557&msid=201334637&ldpld=>

# EBSCOhost parsers in Alma

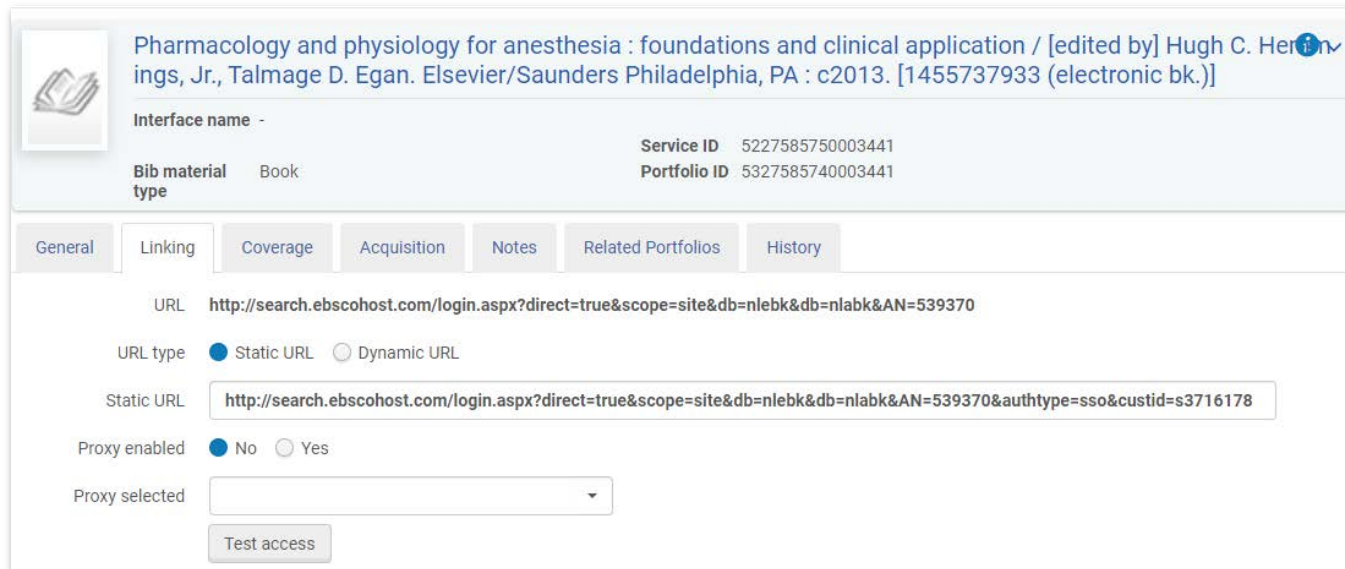
- authtype=cookie,ip,shib for all 22 EBSCOhost collections
- Needed authtype=sso
- authtype parser parameter not configurable - opened salesforce case to make it configurable

Linking Parser Parameters

| Parameter        | Value                |
|------------------|----------------------|
| 1 SHIBBOLETH     | <input type="text"/> |
| 2 CUSTOMER_ID    | s3716178             |
| 3 ATHENS_ID      | <input type="text"/> |
| 4 U_SHIBBOLET... | <input type="text"/> |
| 5 SSO            | yes                  |

# Static URLs for EBSCO

- 140 standalone EBSCOhost portfolios without authtype and customer ID parameters
- Had to be manually edited to add '&authtype=sso&custid=s3716178' to each Static URL



Pharmacology and physiology for anesthesia : foundations and clinical application / [edited by] Hugh C. Heronings, Jr., Talmage D. Egan. Elsevier/Saunders Philadelphia, PA : c2013. [1455737933 (electronic bk.)]

Interface name -

Bib material type Book

Service ID 5227585750003441

Portfolio ID 5327585740003441

General Linking Coverage Acquisition Notes Related Portfolios History

URL <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=539370>

URL type  Static URL  Dynamic URL

Static URL

Proxy enabled  No  Yes

Proxy selected

Test access

# EBSCO Link Resolver Plugin

- 14 EBSCOhost collections with EBSCO Link Resolver Plugin enabled
- Uses EBSCO API to retrieve more accurate links with ID numbers instead of OpenURL
- Example with 'AN' ID:

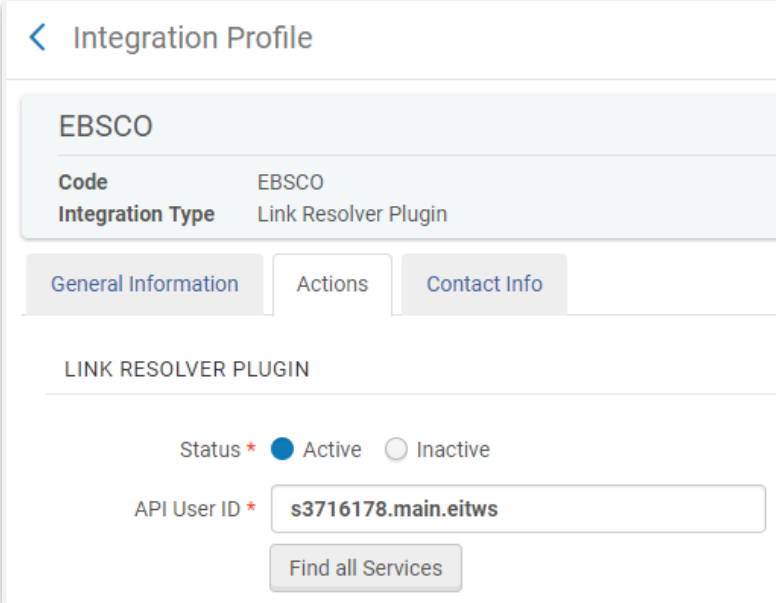
<http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=pdh&AN=2015-25430-001>

- Links more accurate than OpenURL, but missing CQU parameters - authtype and custid



# EBSCO Link Resolver Plugin

- Link resolver plugin integration profile:



The screenshot shows the 'Integration Profile' configuration page for the EBSCO Link Resolver Plugin. The page has a header with a back arrow and the title 'Integration Profile'. Below the header, the profile name 'EBSCO' is displayed. A table shows the 'Code' as 'EBSCO' and the 'Integration Type' as 'Link Resolver Plugin'. There are three tabs: 'General Information' (selected), 'Actions', and 'Contact Info'. Under the 'General Information' tab, the section 'LINK RESOLVER PLUGIN' is visible. It includes a 'Status' field with radio buttons for 'Active' (selected) and 'Inactive'. Below that is an 'API User ID' field with the value 's3716178.main.eitws' and a 'Find all Services' button.

- Contains CQU API User ID, but no username/password to access CQU account
- Alma uses generic API so URLs are returned without institution-specific parameters
- Ex Libris would not fix this for CQU - recommended Ideas Exchange

# EBSCO Link Resolver

- When EBSCO Link Resolver Plugin is not enabled, OpenURL is used:

<https://openurl.ebscohost.com/linksvc/linking.aspx?sid=azh&volume=&custid=s3716178&atitle=out+of+town.&date=20120113&spage=8&issn=0312-6315&stitle=&genre=article&issue=&authtype=sso&title=The+Sydney+morning+herald.>



The screenshot shows the EBSCO Link Resolver interface. At the top, it says "EBSCO Connection". Below that, a red message states "No results were found." and explains that the system was unable to find an exact match. A tip suggests correcting misspellings or data fields. The "Verify request" section contains several input fields: Article Title (out of town), Journal (The Sydney morning herald), Volume, Issue, ISSN (0312-6315), Starting Page, Date (2012-01-13), Author Last Name, and Author First Name. There are "Submit" and "Reset" buttons at the bottom.

- EBSCO Link Resolver does not work without volume and issue numbers
- EBSCO has no plans to fix this, only offers workarounds

# Dynamic URL

- EBSCO's workaround to the parser parameters and vol/issue problem: Dynamic URL
- Option in the Electronic Service

Activation Service Description **Linking** Portfolios Notes History

General Linking Information

Parser **EBSCO\_HOST::ebsco\_am**

Parser (override)

Parser parameters **db\_host=hsi&ebscohosturl = https://search.ebscohost.com & linkurl=https://openurl.ebscohost.com/linksvc/linking.aspx & shib=\$SSHIBBOLETH & customer\_id=\$\$CUSTOMER\_ID & athens\_id=\$\$ATHENS\_ID & u\_shib=\$\$U\_SHIBBOLETH & sso=\$\$SSO**

URL type  Dynamic URL  Parser Parameters

Dynamic URL **IF(rft.atitle)  
https://search.ebscohost.com  
/login.aspx?authtype%3Dsso%26custid%3Ds3716178%26profile%3Dehost%26groupid%3Dmain%26direct%3Dtrue%26db%3Dhsi%26site%3Dehost-live%26bquery%3D(SO+URLENCODE({rft.jtitle}))+AND+(DT+({rft.year}))+AND+(TI+URLENCODE({rft.atitle}))%26from%3Dprimo  
IF()  
https://gss.ebscohost.com/cwu/apps/PrimoToEhost  
/?authtype%3Dsso%26custid%3Ds3716178%26profile%3Dehost%26groupid%3Dmain%26direct%3Dtrue%26db%3Dhsi%26site%3Dehost-live%26bquery%3D(SO+URLENCODE({rft.jtitle}))%26from%3Dprimo**

Test dynamic URL syntax

# Dynamic URL

IF(rft.atitle)

```
https://search.ebscohost.com/login.aspx?authtype%3Dsso%26custid%3Ds3716178%26profile%3Dehost%26groupid%3Dmain%26direct%3Dtrue%26db%3Dbsu%26site%3Dehost-live%26bquery%3D(SO+URLENCODE({rft.jtitle}))+AND+(DT+{rft.year}))+AND+(TI+URLENCODE({rft.atitle}))%26from%3Dprimo
```

IF(rft.pubdate,rft.btitle)

```
https://search.ebscohost.com/login.aspx?authtype%3Dsso%26custid%3Ds3716178%26profile%3Dehost%26groupid%3Dmain%26direct%3Dtrue%26db%3Dbsu%26site%3Dehost-live%26bquery%3D(DT+{rft.pubdate}))+AND+(TI+URLENCODE({rft.btitle}))%26from%3Dprimo
```

IF(rft.btitle)

```
https://search.ebscohost.com/login.aspx?authtype%3Dsso%26custid%3Ds3716178%26profile%3Dehost%26groupid%3Dmain%26direct%3Dtrue%26db%3Dbsu%26site%3Dehost-live%26bquery%3D(TI+URLENCODE({rft.btitle}))%26from%3Dprimo
```

IF()

```
https://search.ebscohost.com/login.aspx?authtype%3Dsso%26custid%3Ds3716178%26profile%3Dehost%26groupid%3Dmain%26direct%3Dtrue%26db%3Dbsu%26site%3Dehost-live%26bquery%3D(SO+URLENCODE({rft.jtitle}))%26from%3Dprimo
```

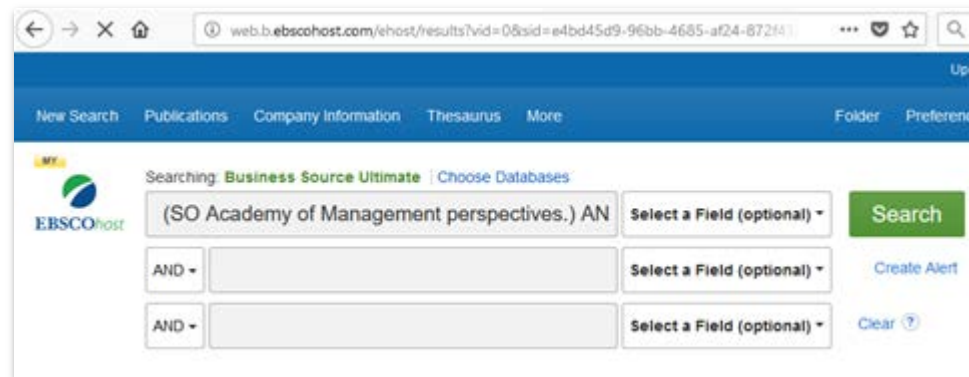
# Dynamic URL

## Article URL:

[https://search.ebscohost.com/login.aspx?authtype=sso&custid=s3716178&profile=ehost&groupid=main&direct=true&db=bsu&site=ehost-live&bquery=\(SO+Academy+of+Management+perspectives.\)+AND+\(DT+2011\)+AND+\(TI+Two+Decades+of+Russian+Business+and+Management+Research:+An+Institutional+Theory+Perspective\)&from=primo](https://search.ebscohost.com/login.aspx?authtype=sso&custid=s3716178&profile=ehost&groupid=main&direct=true&db=bsu&site=ehost-live&bquery=(SO+Academy+of+Management+perspectives.)+AND+(DT+2011)+AND+(TI+Two+Decades+of+Russian+Business+and+Management+Research:+An+Institutional+Theory+Perspective)&from=primo)

## Creates search in EBSCOhost:

(SO Academy of Management perspectives.) AND (DT 2011) AND (TI Two Decades of Russian Business and Management Research: An Institutional Theory Perspective)



The screenshot shows the EBSCOhost search interface. The search bar contains the query: (SO Academy of Management perspectives.) AN. Below the search bar, there are three rows of search criteria, each with an AND operator and a dropdown menu for selecting a field. The interface also includes a Search button, a Create Alert button, and a Clear button. The URL in the browser address bar is: web.b.ebscohost.com/ehost/results?vid=0&sid=e4bd45d9-96bb-4685-af24-872f41.

# Dynamic URL problems

- rft.pubdate comes from 264c field and might include extra characters - [2011] or ©2011
- URLENCODE function full of bugs
  - diacritics
  - & not encoded
  - curly quotations, hyphen and en dash not handled
  - too many brackets breaks it
- No access to jkey parameter
  - big problem for regional newspapers where a keyword search doesn't work: (SO Central Coast (Wyang,(NewSouthWales,Australia)))

# Surprise!

- Recently discovered change to parser behaviour in EBSCOhost Newspaper Source Plus
- Using Dynamic URL for articles
- Still using parser for journal titles - accessing jkey
- Good in theory except for URLENCODE bugs

# Solutions for EBSCO?

- Go back to EZproxy
- Implement OpenAthens
- Unsubscribe to all EBSCO databases
- Do nothing (keep current FAQ workaround)
- Turn off the EBSCO Link Resolver Plugin in Alma and implement 'Dynamic URLs' after URLENCODE bugs are fixed
- Once URLENCODE bugs are fixed, ask Ex Libris to use Dynamic URLs for articles in all collections



# 'No full text available' error in Primo

- Incorrect metadata in Primo Central Index (PCI)
- Incorrect coverage dates or volume/issue numbers in Alma
- Incorrect metadata in the target database
- Insufficient metadata in a PCI record
- Incorrect availability
- Primo 'View It' links querying on only one ISBN

# Only one ISBN used for matching

The PNX record has:

```
<addata>  
  <isbn>9780729585569</isbn>  
  <isbn>9780729541107</isbn>  
  <isbn>9781336243958</isbn>  
</addata>
```

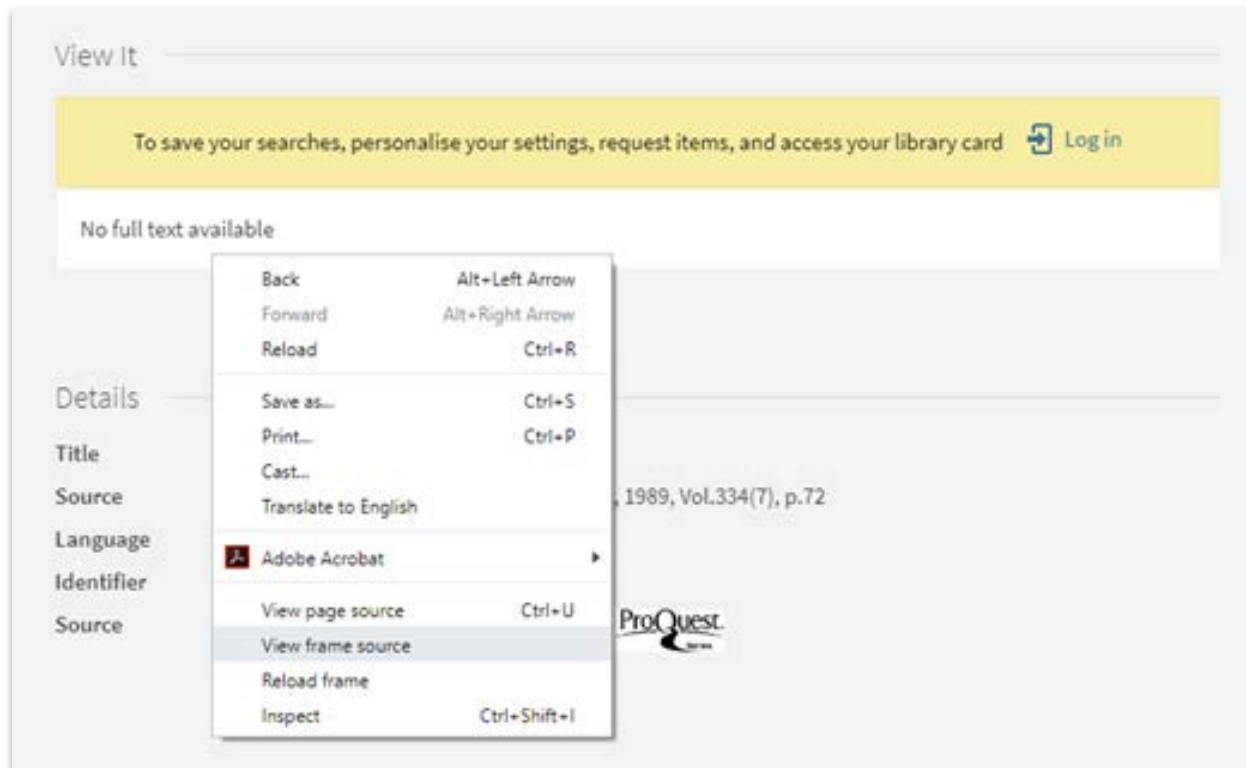
The Alma bib record that it should match to has:

```
020 __ |a 9780729581103 |c 720.00 (3U)  
020 __ |a 9780729541107
```

9780729541107 is the matching ISBN which gives the Primo record the status of 'Full Text Available'

# Accessing debug code

- > Right click on 'No full text available' box
- > Click 'View frame source'



# Debug code

```
<!-- DEBUG:
```

```
<li>http://cqu.userservices.exlibrisgroup.com/view/uresolver/61CQU_INST/openurl?svc_dat=CTO&debug=true&debug=true&ctx_enc=info:ofi/enc:UTF-8&ctx_id=10_1&ctx_tim=2018-08-01T09%253A10%253A59IST&ctx_ver=Z39.88-2004&url_ctx_fmt=info:ofi/fmt:kev:mtx:ctx&url_ver=Z39.88-2004&rfr_id=info:sid/primo.exlibrisgroup.com-ingram_myilibrary&req_id=&rft_val_fmt=info:ofi/fmt:kev:mtx:book&rft.genre=book&rft.atitle=&rft.jtitle=&rft.btitle=Potter%20%2526%20Perry%27s%20Fundamentals%20of%20Nursing%20-%20Australian%20Version%20-%20INKLING&rft.aulast=&rft.auinit=&rft.auinitl=&rft.auinitm=&rft.ausuffix=&rft.au=Crisp,%20Jackie;Taylor,%20Catherine;Douglas,%20Clint&rft.aucorp=&rft.date=2012&rft.volume=&rft.issue=&rft.part=&rft.quarter=&rft.ssn=&rft.spage=&rft.epage=&rft.pages=&rft.artnum=&rft.issn=&rft.eissn=&rft.isbn=9780729585569&rft.sici=&rft.coden=&rft_id=info:doi/&rft.object_id=&rft.eisbn=&rft.edition=&rft.pub=Elsevier%20Health%20Sciences%20APAC&rft.place=&rft.series=&rft.stitle=&rft.bici=&rft_id=info:bibcode/&rft_id=info:hdl/&rft_id=info:lccn/&rft_id=info:oclcnum/&rft_id=info:pmid/&rft_id=info:eric/((addata/eric%7D%7D&rft_date=%3Cingram_myilibrary%3E9781336243958%3C/ingram_myilibrary%3E,language=eng,view=61CQU&svc_dat=viewit&rft_pqid=EBL1724206&is_new_ui=true&Force_direct=false</li>
```

```
END DEBUG-->
```

- Primo only takes the first ISBN (&rft.isbn=9780729585569) and can't find it in Alma, so it shows 'No full text available'
- ISBN 9780729541107 would have matched if added to the query URL
- Ex Libris Salesforce case status: Pending Development

# Conclusion

- Primo linking issues demystified
- Educated library staff about linking issues
- Resolved many issues:
  - Alma electronic service configuration corrected
  - EZproxy added to Primo BO for Primo links
  - EZproxy configuration fully updated
- Still working to resolve some issues:
  - EBSCO a work in progress with FAQ workaround
  - Working with EBSCO and Ex Libris on unresolved issues



# Thank you!

Feel free to email me for more information –  
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