WAM Proxy

Consider the Alternatives

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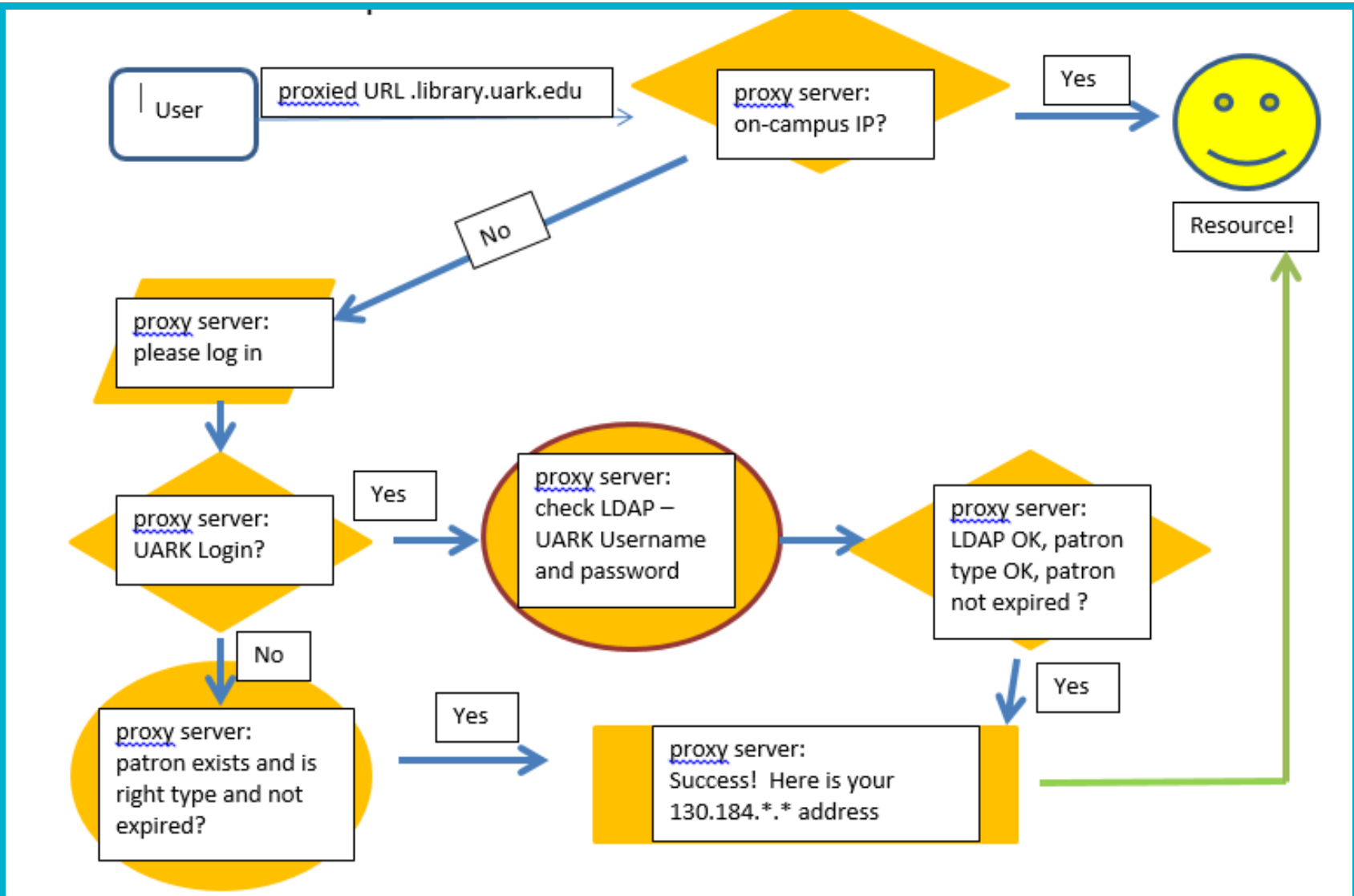
Who is this session for?

- Denial
  - Our WAM proxy is working just fine
- Anger
  - Our WAM proxy never works!
- Bargaining
  - If I could just add 5 more SAN entries….
- Depression
  - No one needs to connect to anything, anyway.
- Acceptance
  - No proxy server works.
- Action
  - I'm going to make WAM work better!
  - I'm going to move to EZProxy!
  - I'm going to research other authentication methods!


User
proxied URL .library.uark.edu
proxy server:
on-campus IP?
Yes
Resource!
No
proxy server:
please log in
proxy server:
UARK Login?
Yes
proxy server:
check LDAP –
UARK Username
and password
proxy server:
LDAP OK, patron
type OK, patron
not expired ?
Yes
No
proxy server:
patron exists and is
right type and not
expired?
Yes
proxy server:
Success! Here is your
130.184.*.* address

Granularity in WAM

WAM Forwarding Table

Token	IP Address/Ho...	Service ...	Verify	Valid Patron Types	Valid Patro...	Database I...	Database ...
al3	*.theameric...	0	5	0-4,7-8,11,13,15,24,25,26,28,32			America...
ria	*.riag.com	0	9	4,13,15,26,28,32			RIA Chec...
aaap	*.aaapjourn...	0	5	0-4,7-8,11,13,15,24,25,26,28,32			AmAsso...
aaccnet	*.aaccnet...	0	5	0-4,7-8,11,13,15,24,25,26,28,32			AACC E-...
aacn	*.aacnjourn...	0	5	0-4,7-8,11,13,15,24,25,26,28,32			AACN EJ...

Limit Network Access in Admin Corner

HTTP ACCESS ADMINISTRATION

	REMOTE HOST	ACCESS?	LOGIN NAME	SERVICE LEVEL
01 >	10.0.16.	Yes	weblaw	9
02 >	10.0.17.	Yes	weblaw	9
03 >	10.0.18.	Yes	weblaw	9
04 >	10.0.19.	Yes	weblaw	9
05 >	10.0.20.	Yes	weblaw	9
06 >	10.0.21.	Yes	weblaw	9
07 >	10.0.22.	Yes	weblaw	9
08 >	10.0.23.	Yes	weblaw	9
09 >	10.	Yes	webcamp	8

WAM: Rewritten URLs

- http://www.jstor.org
- http://0-www.jstor.org.your.libraryserver.edu

WAM: The Un-EZ Proxy

EZ Proxy:

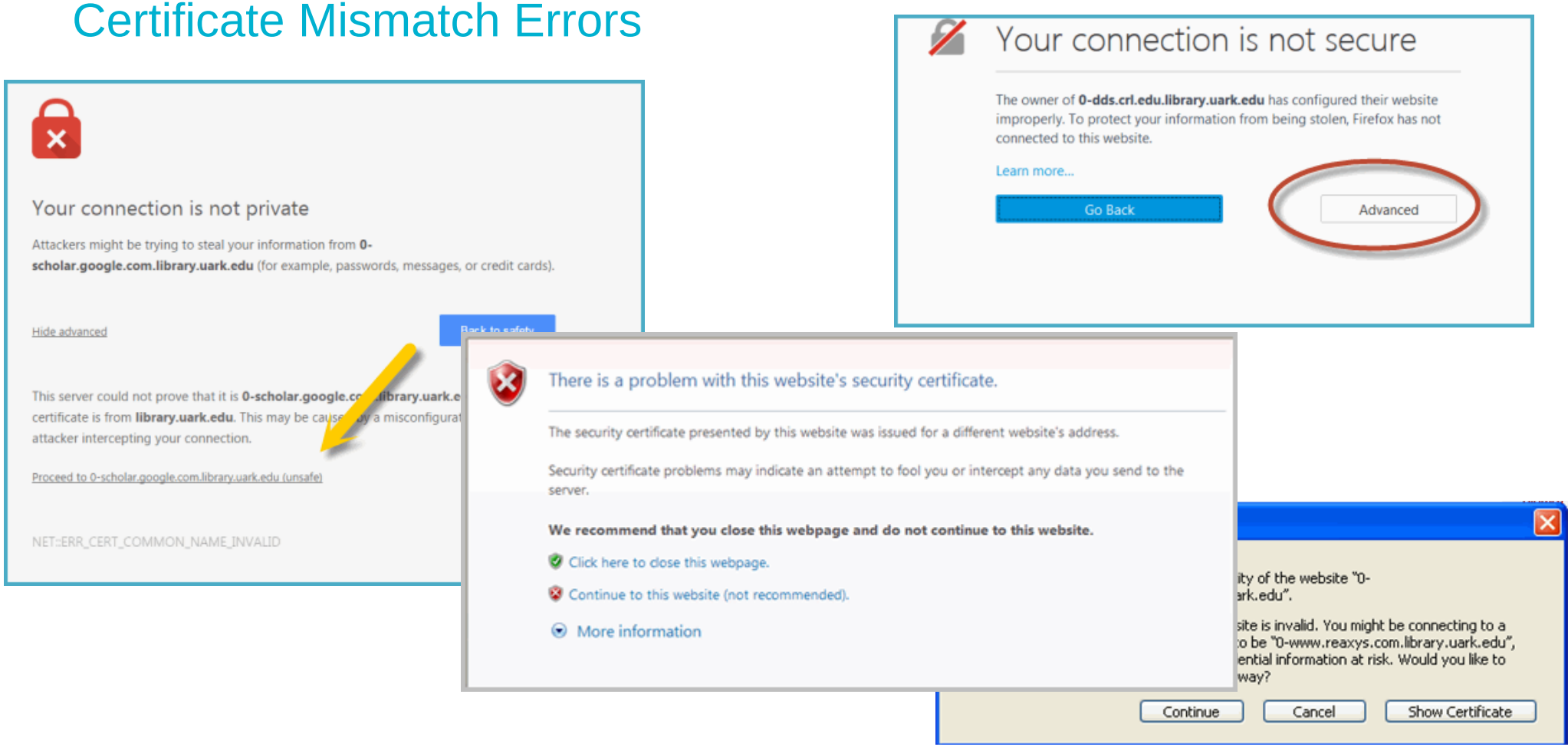
https://libproxy.libraryserver.edu/login?url=http://www.jstor.org/

SSL certificate: *.libraryserver.edu or libproxy.libraryserver.edu

WAM http://0-www.jstor.org.your.libraryserver.edu

SSL certificate: ??? 0-www.jstor.org.your.libraryserver.edu and and and….

Certificate Mismatch Errors



SANs Entries can only take you so far

55	0-portal.mintel.com.library.uark.edu	Mintel login
56	0-www.jstage.jst.go.jp.library.uark.edu	J-STAGE
57	0-login.incites.thomsonreuters.com.library.uark.edu	InCites / JCR
58	0-error.incites.thomsonreuters.com.library.uark.edu	InCites / JCR
59	0-incites.thomsonreuters.com.library.uark.edu	InCites / JCR
60	0-jcr.incites.thomsonreuters.com.library.uark.edu	InCites / JCR
61	0-esi.incites.thomsonreuters.com.library.uark.edu	InCites / Essential Science Indicators
62	0-dds.crl.edu.library.uark.edu	CRL Document Delivery
63	0-www.crl.edu.library.uark.edu	CRL main site
64	0-www.americanlawyer.com.library.uark.edu	American Lawyer
65	0-www.corpcounsel.com.library.uark.edu	Corporate Counsel
66	0-store.law.com.library.uark.edu	American Lawyer / Corporate Counsel
67	0-www.fastcase.com.library.uark.edu	Fast Case
68	0-login.wolterskluwer.com.library.uark.edu	Wolters Kluwer > CHH Intelliconnect
69	0-intelliconnect.cch.com.library.uark.edu	CCH Intelliconnct
70	0-lo.bvdep.com.library.uark.edu	Leadership Library
71	0-library.nclc.org.library.uark.edu	NCLC
72	0-www.editlib.org.library.uark.edu	EdITLib
73	0-app.knovel.com.library.uark.edu	Knovel
74	0-partners.ebrary.com.library.uark.edu	Ebrary admin
75	0-www.learntechlib.org.library.uark.edu	LearnTechLib
76	0-www.impan.pl.library.uark.edu	Insitute of Mathematics (Poland)
77	0-www.ncbi.nlm.nih.gov.library.uark.edu	PubMed

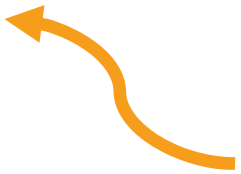
wam_sslhost_replace option

Find it on the Supportal under this easy-to-remember article name:

https://iii.rightanswers.com/portal/app/portlets/results/viewsolution.jsp?solutionid=151113824569333&page=1&position=1

wam_sslhost_replace option

- SSL Certificate covers *.your.libraryserver.edu AND your.libraryserver.edu
- Your links point to http://0-www.jstor.org.your.libraryserver.edu
- The target site uses https and automatically redirects http request to https
- WAM see the redirect and rewrites the URL: https://0-www-jstor-org.your.libraryserver.edu



Hey! *.your.libraryserver.edu covers this, now!

Where do I start?

1. Get your new SSL certificate ready for *.your.libraryserver.edu AND your.libraryserver.edu

2. Look for https links already in use.

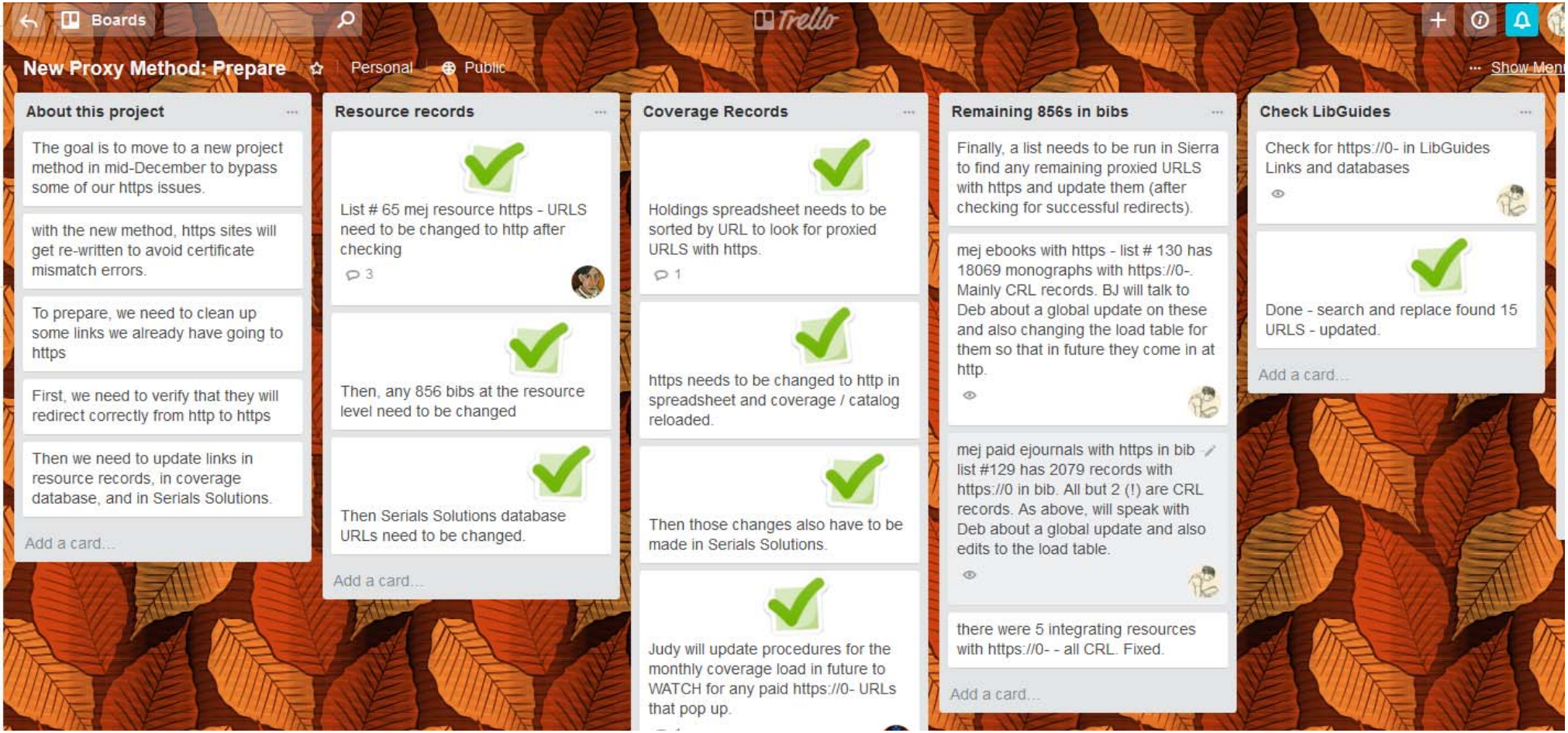
   a. See if they will work with just http.
      If so, change them now.

   b. If not, you are going to want to make a note of where they are so that you can later change that https link to use dashes, example:
      https://0-research.valueline.com.your.libraryserver.edu
      https://0-research-valueline-com.your.libraryserver.edu

The great HTTPS hunt

- Sierra system: create lists for 856 with proxy and https
- Knowledge Base
  - We use Serials Solutions: exported all holdings and sorted by URL
- Website database of databases
- LibGuides Search and Replace Tool
- LibAnswers
- Campus LMS (Blackboard)

The project


Boards
Trello
New Proxy Method: Prepare
Personal
Public
Show Menu
About this project
The goal is to move to a new project method in mid-December to bypass some of our https issues.
with the new method, https sites will get re-written to avoid certificate mismatch errors.
To prepare, we need to clean up some links we already have going to https
First, we need to verify that they will redirect correctly from http to https
Then we need to update links in resource records, in coverage database, and in Serials Solutions.
Add a card...
Resource records
List # 65 mej resource https - URLS need to be changed to http after checking
3
Then, any 856 bibs at the resource level need to be changed
Then Serials Solutions database URLs need to be changed.
Add a card...
Coverage Records
Holdings spreadsheet needs to be sorted by URL to look for proxied URLS with https.
1
https needs to be changed to http in spreadsheet and coverage / catalog reloaded.
Then those changes also have to be made in Serials Solutions.
Judy will update procedures for the monthly coverage load in future to WATCH for any paid https://0- URLs that pop up.
Remaining 856s in bibs
Finally, a list needs to be run in Sierra to find any remaining proxied URLS with https and update them (after checking for successful redirects).
mej ebooks with https - list # 130 has 18069 monographs with https://0-. Mainly CRL records. BJ will talk to Deb about a global update on these and also changing the load table for them so that in future they come in at http.
mej paid ejournals with https in bib list #129 has 2079 records with https://0 in bib. All but 2 (!) are CRL records. As above, will speak with Deb about a global update and also edits to the load table.
there were 5 integrating resources with https://0- - all CRL. Fixed.
Add a card...
Check LibGuides
Check for https://0- in LibGuides Links and databases
Done - search and replace found 15 URLS - updated.
Add a card...

Find
Libraries and Collections
Services
About the Libraries
University Research
StaffWeb

Give to the Libraries

Email page link

Mullins Library is open today
12pm - 2am
View All Library Hours

Your Proxied URL

http://0-www.jstor.org.library.uark.edu

Test it to make sure it works! (new window will open)

Copy and paste this link into your course documents, emails to students, or Blackboard site.

Go Back and make another.

Error Message?

If your test results in an error message, for example:

"The address you are trying to access is invalid."

...the Libraries may not subscribe to the resource in question.

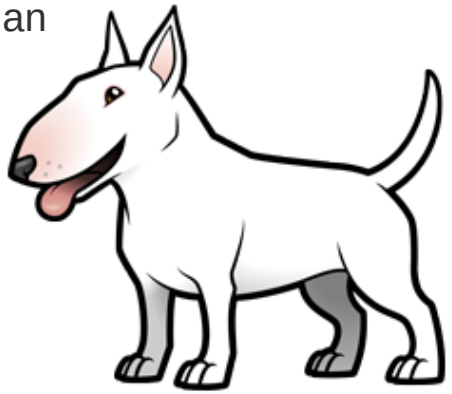
Check the A-Z list of databases or Library Catalog to determine if the Libraries subscribe to the resource you are trying to proxy.

Contact Library Web Services for help with the proxifier.

All is not paradise

- Continuing issues with various https elements on some websites
- TLS / SSL and encryption levels / ciphers
- A host of fixes in Sierra 3.4:
  - Nexis Uni
  - Forward slashes / Emerald
  - Factiva
  - Ebsco password strength
- 502 / caching seems worse
  …or does it?
- Still hard to explain to vendors

"A good plan executed now is better than a perfect plan executed next week."



Objectives

- **How Does EZproxy Work?**
- **Two Server Options: Software Only versus Hosted**
- **Software Only: What's Involved in Implementation**
  - Two Configuration Options: Proxy by Port versus Proxy by Hostname
  - Adding a stanza for each of your subscription resources
- **Proxying Existing and New Bibliographic Records in Sierra**
  - Proxying the 856 Field on Existing Bibliographic Records
  - Proxying New Records with Data Exchange and a Translation Map

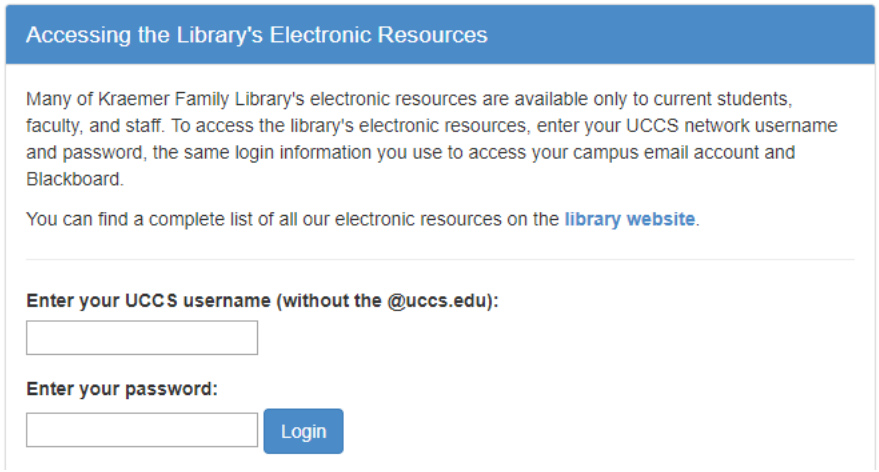
How Does EZproxy Work?

- EZproxy works with resources that use IP authentication
- Each of your electronic resource vendors needs to have the IP address of your EZproxy server whitelisted
- Then, you add a **stanza** for each resource to your EZproxy configuration
- The stanza lists all of the domains that EZproxy should proxy for that particular resource

```
Title MarketLine Advantage
URL http://advantage.marketline.com
HJ advantage.marketline.com
HJ https://advantage.marketline.com
DJ marketline.com
```

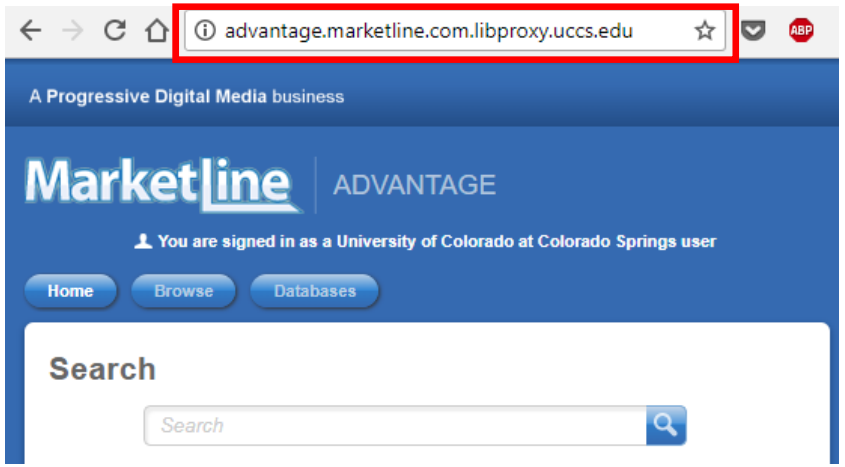
How Does EZproxy Work?, continued

- Once the stanza is added, you need to update any links to the resource so that they point users to your EZproxy server
- Links must begin with your **EZproxy referring URL:** ***https://proxy.yourlibrary.edu/login?url=http*://advantage.marketline.com/**
- This URL points users to your proxy server for authentication



How Does EZproxy Work?, continued

- Once the user is authenticated, all traffic between the user and the electronic resource is routed through the proxy server



- **It handles HTTPS sites**, too, as long as you have a wildcard SSL certificate (for instance, *.proxy.yourlibrary.edu)

Two Server Options: Software Only versus OCLC Hosted

Software Only	OCLC Hosted
Cheaper	More expensive
You are responsible for server configuration, backups, and operating system updates	OCLC handles the server configuration, backups, and operating system updates
Will need to acquire and install your own SSL certificate	OCLC provides and installs an SSL certificate
Also responsible for EZproxy upgrades	OCLC performs all EZproxy upgrades
Responsible for all network troubleshooting	OCLC handles all network troubleshooting
Changes to your configuration file are immediate	Changes to your configuration file can take up to 48 hours

Software Only: What's Involved in Implementation

1. Deciding on a server operating system (Windows, Linux, or Solaris)
2. Installing EZproxy
3. **Deciding between Proxy by Hostname and Proxy by Port**
4. Opening the required ports on the network
5. Acquiring and Installing an SSL Certificate
6. **Choosing and configuring an authentication method**
7. Configuring the login page, error pages, and other HTML pages
8. **Adding a stanza for each of your subscription resources**
9. Testing, testing, testing…
10. **Updating the links to all your electronic resources**

Proxy by Port versus Proxy by Hostname

Proxy by Port versus Proxy by Hostname

Proxy by Port	Proxy by Hostname
The default EZproxy configuration	Requires additional configuration
Uses a unique, nonstandard port number for each resource	Funnels all traffic through ports 80 and 443
Often isn't accessible from healthcare, military, and other secure sites	Should work about anywhere since ports 80 and 443 are widely used and supported
Requires additional ports to be open on your firewall	Only requires two ports to be open on your firewall
Requires a standard SSL certificate	Requires a wildcard SSL certificate
Not recommended	**The optimal EZproxy configuration**

Proxy by Port versus Proxy by Hostname

URLs are formatted differently after authentication:

Proxy by Port:

http://www.somedb.com.proxy.yourlibrary.edu:8080/

Proxy by Hostname:
http://www.somedb.com.proxy.yourlibrary.edu/

Choosing and configuring an authentication method

EZproxy Supports a Wide Range of Authentication Methods

- LDAP
- SAML-based (Shibboleth, Azure, Google SAML, etc.)
- Innovative Interfaces, Inc.
- SirsiDynix
- Blackboard
- IMAP or POP
- Text File
- And many more…

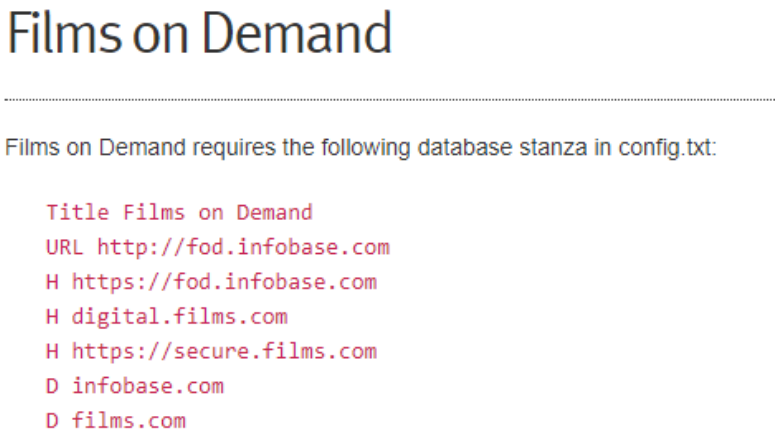
Adding Proxy Stanzas for All Your Electronic Resources to the EZproxy Configuration File

Adding Resources to Your EZproxy Configuration

- Every electronic resource that uses a unique web domain will require an entry (*known as a "stanza")* in the EZproxy configuration file
- Many database and journal vendors provide pre-written EZproxy stanzas for their resources
- You can also write your own stanzas for resources that don't have a pre-written stanza
- Other EZproxy users also share stanzas on the EZproxy listserv (**EZPROXY-L@OCLCLISTS.ORG**)
- You can use a web page monitoring service such as *Follow That Page* (https://www.followthatpage.com/) to stay on top of stanza changes

Finding Pre-Written EZproxy Stanzas

- Many vendors provide Ezproxy stanzas via their subscriber support site and in the admin section for the resource
- OCLC also maintains a database of vendor-supplied EZproxy stanzas at **https://www.oclc.org/support/services/ezproxy/documentation/db.en.html**



Films on Demand

Films on Demand requires the following database stanza in config.txt:

```
Title Films on Demand
URL http://fod.infobase.com
H https://fod.infobase.com
H digital.films.com
H https://secure.films.com
D infobase.com
D films.com
```

Follow That Page (https://www.followthatpage.com)

- A webpage monitoring service that emails you whenever a webpage is updated
- Set it to monitor the OCLC stanza page and receive an email when it's updated

Writing Your Own EZproxy Stanzas

- Some vendors don’t provide pre-written stanzas, so you will sometimes have to write your own

Proxying the 856 Field on Existing Bibliographic Records

Proxying the 856 Field in Existing Bibliographic Records

- Create a Review File of bibliographic records that need to be proxied.
- Use the Global Update function to add the EZproxy referring URL to the 856 field.
- Select “Change Variable-Length Field” option; make sure the “Use Displayed Field” is *not* checked.
- Find/Replace 856 field |uhttp: with |uhttps://proxy.yourlibrary.edu/login?url=

Proxying New Records with Data Exchange and a Translation Map

Creating a Translation Map to Insert the EZproxy Referring URL

In Putty, navigate to A > M > X > E > T

1

```
INNOPAC File Validation and Maintenance

P > Load PROFILES (m2btab)
T > TRANSLATION Tables (m2bmap)
Q > QUIT
Choose one (P,T,Q)
```

2

```
                                M2BMAP Suffixes
1 > ident
2 > itype
3 > loc
4 > pcode1
5 > proxy
6 > ptype
7 > status
8 > vendor
```

3

```
EDITING FILE: m2bmap.proxy
^E > END          ^F > Show FULL Menu          OVERWRITE

@delimiter=:
@bar_subfield=true
@case=true
^(.*)$0|u(.*)$1:\0|uhttps://libproxy.uccs.edu/login?url=\1
```

Load Profile Translation Map to Auto Insert EZproxy Referring URL

Sample 856 field:

856 40 |uhttp://iopscience.iop.org/book/978-1-6270-5481-2|zview eBook

Translation Map:

^(.*)$0|u(.*)$1:\0|uhttps://proxy.yourlibrary.edu/login?url=\1

How it Works:

- Uses Regular Expressions
- Everything prior to “|u” is copied and stored in memory bank “0”
- Everything after “|u” is copied and stored in memory bank “1”
- Contents of memory bank 0 are then inserted into the 856 field, followed by |u and the referring URL (*https://proxy.yourlibrary.edu/login?url=),* and then the contents of memory bank 1 are inserted after the referring URL

Calling the Translation Map from a Load Profile

- Once the translation map is created, call it within a load profile by inserting *%map("m2bmap.titleoftranslationmap")* in the final bucket of the 856 field line of the load profile

```
800-811||-xw|0|0|b|s|0|y|N|0|
830||-w|0|0|b|s|0|y|N|0|%bracket="h"
840||-w|0|0|b|s|0|y|N|0|
850-852||+|0|0|b|y|0|y|N|0|
#856||+|0|0|b|y|0|y|N|0|
856||+|0|0|b|y|0|y|N|0|%map("m2bmap.proxy")
880||+|0|0|b|y|0|y|N|0|
882-883||+|0|0|b|y|0|y|N|0|
909||+|0|0|b|y|0|y|N|0|
950||+|0|0|b|y|0|y|N|0|
```

WAM Proxy

Your Alternatives?

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