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1-1-2022

Modernizing Authentications: Transitioning E-Resources to SSO via OpenAthens

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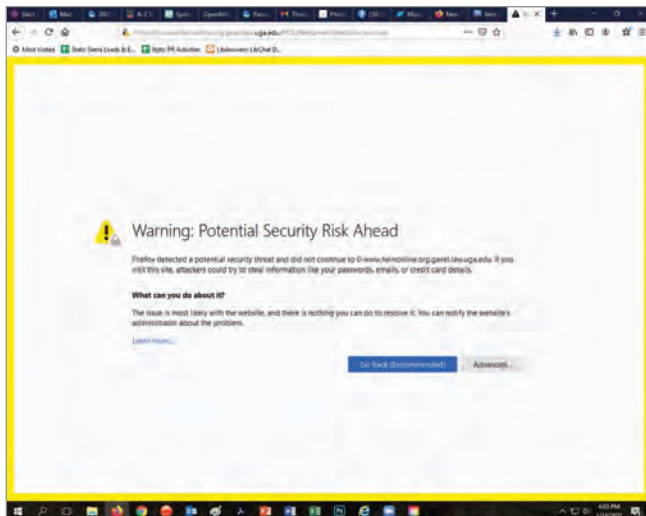
Repository Citation

Evans, R. & Tubinis, J. (2022). Modernizing authentications: Transitioning e-resources to SSO via OpenAthens. *Computers in Libraries*, 42(5), 18-23.

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We know this transition to **OpenAthens** for our **library's e-resources** is ultimately the **best solution** for our **users**. ...

For a few years now, the higher-education institutions across the state of Georgia have been transitioning e-resource access from legacy methods such as web access management (WAM) proxy and IP address authentication to single sign on (SSO) via OpenAthens (openathens.org). The University of Georgia's (UGA) Alexander Campbell King Law Library began discussing OpenAthens as a solution in 2017, but with a separate ILS and additional unique sets of online resources from the main university libraries, the transition process was more complicated than for other libraries in our state. In this article, we share our library's ongoing journey with OpenAthens and what we've learned along the way.



Before any of our resources transitioned to OpenAthens, this was the most common screen that users would see when trying to access the library's most popular e-resources.

Background

According to a *Georgia Library Quarterly* article by Russell Palmer, the assistant director for Georgia Library Learning Online (GALILEO) support services, the state's decision to select OpenAthens occurred as a result of major changes in the vendor platform landscape in summer 2017, followed by an evaluation of authentication solutions in fall 2017. Furthermore, all major web browsers had recently updated their built-in security features, and most vendors were moving their platforms to https:// sites for improved privacy and security. After these upgrades, many vendor products tested were not performing as expected because of our legacy proxy server software (Innovative's WAM). GALILEO ultimately purchased OpenAthens in January 2018, and pilot implementation began across the state's higher-education institutions in April 2018 (Palmer 2019).

Of course, each library is different. There are many case studies and other examples of libraries modernizing



By Rachel Evans and Jason Tubinis



e-resource authentication, including moving specifically from WAM proxy or IP access to SSO (such as Georgetown University Medical Center Library; seamlessaccess.org/learning-center/case-study). Even in the state of Georgia, one of the earliest libraries to transition to OpenAthens was another library running Innovative's Sierra catalog services (Agnes Scott College). However, our library situation was different from other situations we could find examples of. Law school students and faculty members needed access to both the larger university-wide resources available through our main library as well as to law school-specific resources. And while UGA's university libraries use Alma, our law library catalog relies on Innovative's Sierra. We also have our own separate instance of a libguide



**SINGLE
SIGN ON**

**MODERNIZING
AUTHENTICATION:**
Transitioning **E-Resources**
to **SSO** via OpenAthens

for our A–Z database list. We even maintain separate library patron profile records in our Sierra catalog.

Prior to our OpenAthens transition, most of our e-resource links took users to our library catalog’s login screen, where they were prompted to use their law library credentials to gain access via the WAM proxy. A smaller set of resources relied on IP address authentication, limiting access to users who were on campus or required unique usernames and passwords for specific databases.

Pre-Planning

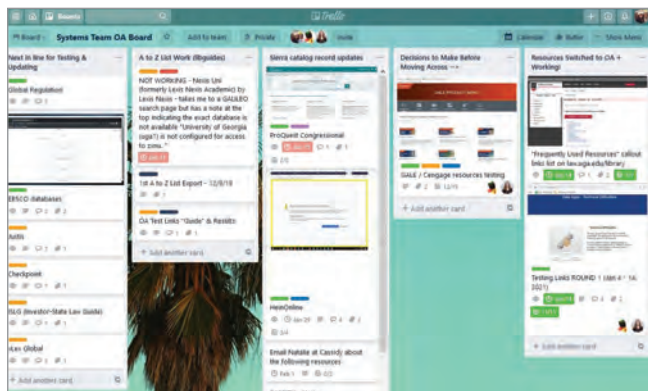
In July 2019, our small systems team of three librarians, consisting of a metadata librarian, an IT librarian, and our associate director of collections librarian, met to discuss requests from OpenAthens for beginning implementation. This involved turning on an integrated login module in Sierra and required APIs to be generated for Sierra to talk to EBSCO and UGA’s SSO software. This was the first step in allowing users to log in using their university

A master Google spreadsheet was used to document the content resources to be included.

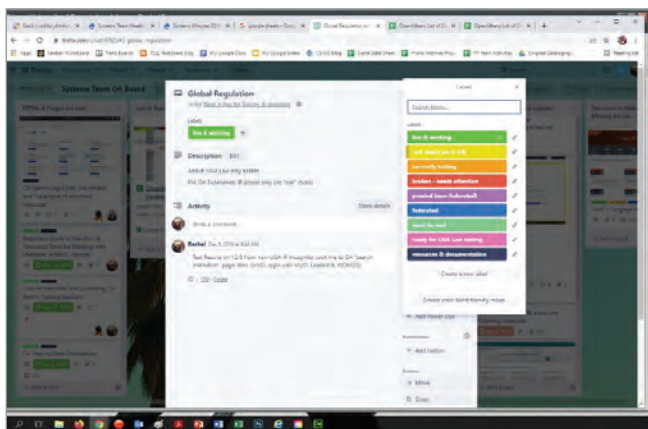
ID and password, rather than a separate ID maintained in our catalog. (Although for some users, the two might be the same or very similar.) Other initial steps involved reading up on all of the available OpenAthens documentation, including some really helpful guides developed by GALILEO and EBSCO to assist librarians

across the state in updating their most common resources. Finally, a master spreadsheet was generated showing law school resources and the level of user access—e.g., if a resource available to both law and big UGA users or only to our law user groups—complete with existing database URLs and related vendor information. Because so many of our links were WAM-proxied, almost all URLs needed to be cleaned and restructured. Much of our fall 2019 was spent preparing this spreadsheet for our go-live date, which was originally scheduled for January 2020.

To map out our small team’s workflow, track progress, and have a central location for related documentation, we set up a Trello board for OpenAthens in 2019. All three systems team librarians had equal access to add, edit, and move items across the board’s columns so they could check in at any time on the status of work and assignments. We also linked a Google Sheet version of the master database list to this Trello board as well as a small private libguide for initial testing. In December 2019, a thorough test of our complete A–Z database list documented the access level and any existing issues with resource links. At that time, many resources required end users to click to “accept the risk” up to 10 times after authentication in the library catalog in order to gain access to a given item. We planned to use this data on existing access issues as a baseline when testing “Athenized” links (OpenAthens URLs) against our previous links. This way, after the transition, we would be able to determine if access and user experience had been maintained or improved. For many resources, we knew that expanding access from only on-campus IP addresses to anytime/anywhere access would be a huge improvement.



A systems team Trello OpenAthens project board was used to track workflow.



The systems team’s Trello resource card and color labels

Tiered Testing and False Starts

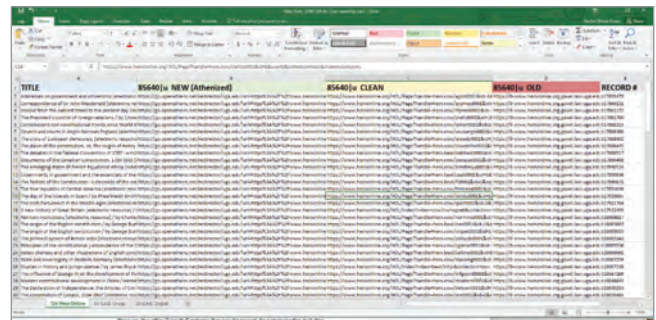
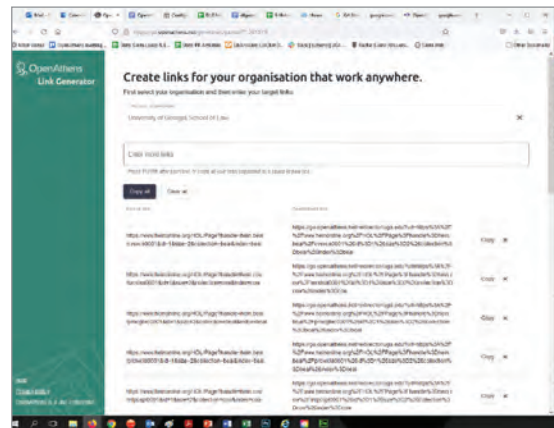
We gained access to our own law library-specific administrative portal in OpenAthens to manage users, run analytical reports on database usage, and generate Athenized links on demand. Although we were prepared for a go-live date the second week of January 2020, unforeseen issues arose between law library users and the rest of the university’s users in OpenAthens. Our transition was postponed while several meetings and other troubleshooting took place in early 2020. Still, we were able to continue

testing many of our law school-specific resources and remained prepared for the eventual transition. Ultimately, it was determined that a new active directory user group would need to be created and supplied by our IT department to ensure a refresh of law student, faculty, and staff users each semester, so that UGA’s SSO could point to a law school-specific attribute that differentiated law users from the rest of the university.

Around the same time, the university had a major push for all systems across campus to move to SSO. In order for our library catalog to continue working with SSO, we had to establish a new server running Apache. The university’s IT services (EITS) granted us an exception for a short time in which we were able to continue using lightweight directory access protocol (LDAP) until arrangements could be made for the right information to be exchanged between Innovative for Sierra and EITS. This involved an upgrade of Sierra in early March 2020. In October 2020, a joint meeting including members of the law library, UGA’s EITS, and Innovative took place to resolve the ongoing LDAP and authentication issues with the library’s catalog. Ultimately, the law library’s catalog would have to move its server from our physical space in the library to Innovative’s cloud server space.

Phase 1: Completing Website Resource Link Updates

Although our eventual move to the cloud would not take place until May 2021, the time between January 2021 and May 2021 was spent prioritizing our resource links,

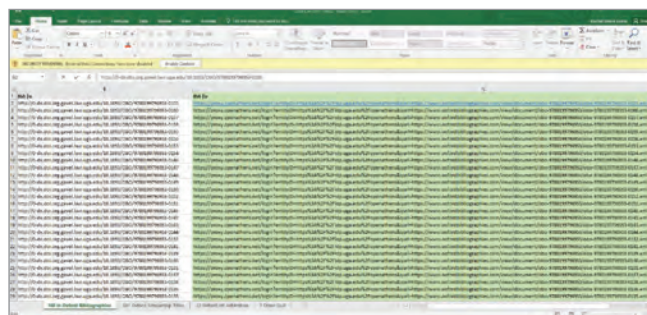


OpenAthens link generator showing old and new URLs (above), alongside a corresponding spreadsheet listing old, clean, and new URLs

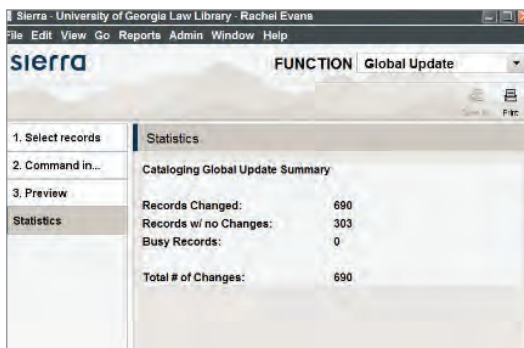
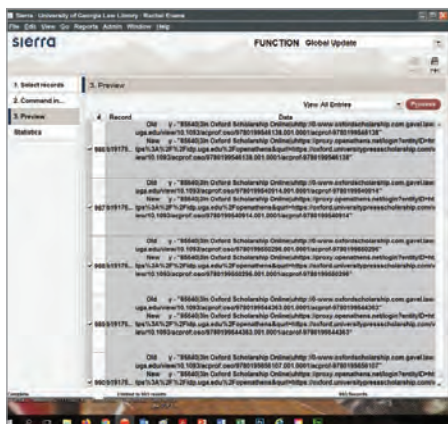
generating Athenized URLs for testing both on-campus and off-campus, and updating instances of collection-level links across our library’s platforms. The first, quickest, and easiest site to update URLs in was our library’s website. We had maintained a very short list of our seven most frequently used resources, which appeared on our library website homepage at the time (our library’s website design has since changed and no longer includes this list). These seven were the first to be tested and updated. In January and February 2021, an expanded list of resources was also tested and slowly changed across platforms.

Phase 2: Progress Updating the A-Z Database List

As you can see from the screenshot of our Trello board (on page 20), cards with one or more vendor resource links moved across a series of columns, from left to right: “Next in line for testing,” “A-Z List Work (LibGuides),” “Sierra Catalog Record Updates,” and finally “Resources Switched to OA and Working!” Color codes were also used to tag and highlight resource cards. Orange was used for “currently testing” and red for “broken—needs attention,” while green was “live and working.” OpenAthens differentiates between federated and proxied (non-federated) resources, so additional color tags were used for resource cards so that information could be a part of troubleshooting issues. As we came across resources during testing that did not work as they should have, we saved large numbers of screen captures. These were extremely useful to pass along to folks at GALILEO/EBSCO and OpenAthens—or to vendor technical representatives if issues couldn’t be resolved and



Sierra’s Global Update function (top), showing command input to process find and replace for the 160 titles; spreadsheet (bottom) of EBSCO/GALILEO-provided Oxford Bibliography of OA URLs



Screenshot of Sierra's Global Update function showing preview results for 993 records from a command input to process find and replace for Oxford Scholarship titles beside a stats summary

warranted escalating tickets. By June 2021, 96 of our original 105 collection-level resource links had been updated in our libguide A-Z database list to use OpenAthens URLs.

Phase 3: MARC Catalog Record Updates for Databases, Series, and Titles

In May 2021, the transition to cloud hosting was a good push to finalize some catalog record updates so that 856 subfield “u” URLs were Athenized and no longer pointing to the WAM proxy. We began sunseting maintenance for the WAM table in Sierra, and collection-level catalog records for e-resources were updating individually. Several databases with a catalog record had one or two records, so updating was essentially as quick and easy as updating an individual resource in libguide assets. This was true for 38 bibliographic records that were able to be manually updated by June 31, 2021.

However, there were a handful of providers with series-level and title-level URLs. This meant that for all URLs to be Athenized, we had to generate a solid list of all titles from that vendor and globally update a batch of catalog records. Each URL would be unique, so a find and replace wasn't as simple as you might think. We chose to break these larger groups of vendor-specific records down into sets of 50. In the OpenAthens administrative view, you can upload a spreadsheet to batch update a set of URLs, but we found the public-facing OpenAthens link resolver tool to be quicker and more effective. To use it, you can select up to 50 rows of clean links, paste them into the link generator, and then hit Copy All to copy and paste them into a clean spreadsheet row. Doing small batches helped us to identify errors that are harder to locate if you have rows of 150 or more. As an example of this small-batch approach, we successfully updated 8,037 URLs in catalog records for titles from ProQuest's Ebook Central using Sierra's Global Update

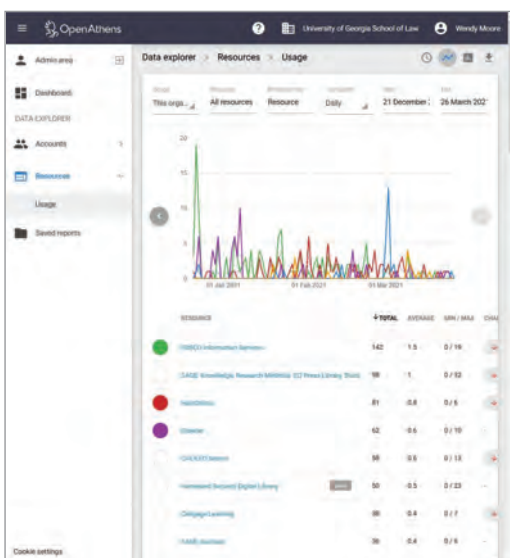
dates to those catalog records by requesting a full set of updated records at the time that we sent our updated profile for future 856 field formatting with OpenAthens URLs. Reaching out to our Cassidy contact resulted in 36,382 Athenized links, saving us tons of time. This request did not cost us any additional money, as it was a part of our agreement and contract.

Issues with specific vendors that did not play as nicely with OpenAthens as originally thought, including Oxford University Press (OUP), required a lot of troubleshooting on the part of GALILEO/EBSCO teams, our law library team and the university libraries team, and vendor technical support.

These issues stretched from fall 2021 to spring 2022, resulting in a reconfiguration of our law content users and a second round of updating law library OUP URLs. As of this writing, we continue to work on link updates for OUP resources with the GALILEO/EBSCO team, which will soon include improved access to approximately 900 titles from the Oxford International Bibliographies, Oxford Scholarship, and Oxford International Arbitration series.

Progress and Ongoing Transition

Using this combination of batch catalog record updating (including manual batches of links updating locally), utilizing cataloging services to assist in certain vendor link updates, and requesting assistance from GALILEO/EBSCO to provide batch updates for OUP resource links that we cannot generate in our own administrative OpenAthens portal as a result of those configuration changes, we have, at the time of this writing, updated more than 45,000 bibliographic e-resource records. Although we have experienced many setbacks and delays along the way that were outside of our control (system upgrades, moving our catalog to the cloud, and university-related and vendor-related



OpenAthens data explorer report for usage of resources

Tips for Major Resource Authentication Transitions

1 Use a project management application such as Trello as your home base.

Even now, 4 years after establishing the project board, we continue to turn to the board as the location of key project resources and a historical timeline of project progress. Bonus points go to this tool, because the board is available anytime, anywhere—such as when you are suddenly working from home.

2 Create and maintain good working relationships with all parties.

This can be a tough one with so many groups involved representing your own library, the university's library, related IT departments, your platform and resource vendors, and even statewide entities such as GALILEO/EBSCO. The best advice is to meet often and take notes, and don't be afraid to ask clarifying questions in meetings or in follow-up emails.

3 Cast a wider net than you think you will need when generating lists of URLs.

Sometimes, you want a very specific search to update a certain small set of record URLs, but you don't know what you don't know. Start your lists and queries with a broader range of

search criteria. You will be surprised how many broken/dead links can fall through the cracks.

4 Save all versions of the spreadsheets you work with.

You never know when that last round of URL changes might need to be reversed or pulled out and reworked. Back up everything, and maintain lists of the old links even after transition. Comparing the existing before URLs to the newly updated ones helps.

5 Beware of big batches updated locally, and run smaller test batches for vendor-initiated updates.

Even the best find-and-replace commands can be tricky when you are doing batches of tens of thousands of records at a time. Especially for Sierra's Create Lists feature, we break down master lists for all resources of a certain type into smaller lists so we can try to control the number of possible errors.

6 If one does not already exist, create a streamlined system for users to report access issues throughout your OpenAthens transition.

We did not have a ticketing system like the larger university, and we

also did not have a single individual responsible for all issue types we might need to troubleshoot as we embarked on our multiyear transition for resource authentication. So, our system team set up and continues to use a library systems listserv email address, which reminds all librarians, staffers, and patrons that if they experience issues accessing any e-resource during this transition to report it in email to our listserv address. This way, we can triage specific issues, delegating individual tasks to one of the three team members, depending on issue type: URL not yet Athenized, an access issue on the vendor side, or a patron permissions issue.

7 Be prepared to prioritize the resources users are having trouble with on a rolling basis to move them to the top of the queue for Athenizing.

Despite our best efforts to Athenize our most popular resources first, we continue to update thousands of links in our catalog records and continue to make one-off Athenizations on an ongoing basis, as users come across individual resources we have not yet updated within a catalog record.

authentication issues, not to mention a pandemic), we can finally see the light at the end of the tunnel. We know this transition to OpenAthens for our library's e-resources is ultimately the best solution for our users, and we can see the improvements to resource discoverability and access in the platform's admin reporting dashboard. ■

Resources

Palmer, R. (2019). "The GALILEO OpenAthens Project." *Georgia Library Quarterly*, 56(3). Retrieved from digitalcommons.kennesaw.edu/gdq/vol56/iss3/9.

OpenAthens, openathens.org.

Seamless Access Case Study, seamlessaccess.org/learning-center/case-study.

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As members of the law library's systems team, they work together on large-scale projects related to the library's various platforms, including access and authentication of databases and other e-resources.