

# Technology Report

March, 2022

## Content Filtering

We have set up a trial of Untangle for filtering and are evaluating it to determine where customization may be necessary and whether it will meet our requirements.

## Backup Collaboration

The server backup equipment was upgraded to the latest version of its firmware. SCLS is backing up all their servers to the IDPA system. We are in the process of onboarding Monarch and Winding Rivers Library Systems.

## Virtual Server Infrastructure

Our virtual server hosts have been replaced with (2) new Dell PowerEdge R650 servers. They have already had software upgrades completed on them since being installed. The SAN storage platform will have its firmware upgraded in April.

## Antivirus Replacement

Our 3-year maintenance contract for Kaspersky Endpoint Protection expires on July 4<sup>th</sup>. In light of current events globally and based on the recommendation of the FCC, we are researching and testing alternatives. Kaspersky has been a very successful and cost-efficient security application for SCLS since 2013. Until recently, we had planned to simply renew the license for three more years.

## Grants

**ARPA, LSTA, & SCLS Funds:** Most libraries have submitted their requests for projects and we will begin the ordering process ASAP as the cost of items continues to increase.

**2022 E-rate:** SCLS has selected vendors and submitted 471 forms for WiscNet and MUFN ISP and also for external wireless access points for participating libraries. We did not receive a viable response to our request for network equipment, so we will shift the purchase of network equipment for E-rate eligible libraries to the 2023 E-rate cycle.

## Cybersecurity Training

We continue to have periodic meetings with the other library systems that are participating in the Infosec cybersecurity training. If your library is enrolled in the Infosec training and you'd like a report of your library's participating staff to review for accuracy and participation details, please contact the Help Desk.

## Drupal 9 migration

SCLS staff continue to work out some pesky technical issues and have adjusted the timeline to reschedule a handful of the March and April migrations for later in the year.

## SCLS Network

**Network Security Project:** In an effort to improve the safety of library staff and patrons, a project has begun to add several security features and standards to the SCLS network. The highlights of the project include creating new Layer 3 Access Control List standards and ensuring SCLS device identity in public spaces. The new Access Control Lists will allow traffic to reach necessary required destinations while blocking unnecessary destinations. In the event of malicious operation, these standards will help curb access of nefarious parties. The second point hopes to prevent unlawful entry on SCLS-supported patron networks. There is a growing trend that patrons are disconnecting the Patron Access Computers and connecting their own devices. There is potential this exploitation could cause harm to people and infrastructure on both a local and system level. To counter this potential, we will be effectively “whitelisting” SCLS-supported Patron switchports. Any device that does not match this list will not gain access on the network. **Update:** The piloting process has reached completed the initial phase (1 of 3). We will be moving onward onto phase 2. Early 2<sup>nd</sup> quarter completion is the goal for the pilot with mid-2<sup>nd</sup> quarter completing full adoption.

**Network Configuration Development:** There is a new project to translate a current custom desktop application used for configuration orchestration into a web application. This is in the early phases of discovery. SCLS Technology staff will use the tool to perform on demand configuration requests, changes, and troubleshooting. This tool helps foster inclusion amongst staff to perform day-to-day network operations with minimal experience. The move to a web application will help with source control and centralized distribution.

### BadgerNet RFP Evaluation Process

BadgerNet will be going through a bidding process this summer. DOA TEACH recruited Will Allington to serve as the representative for Wisconsin public libraries and public library systems on the RFP Evaluation Committee.

## After Hours Support (On Call)

The Support Team discussed the matter of providing support to non-SCLS supported systems beyond standard operating hours (8:30am – 5pm). Due to the nature of these systems, we are unable to provide support during afterhours. Systems include all SCLS as ISP system connected to the SCLS network. This information is now included in the SCLS as ISP documentation.

As a reminder, only urgent problems should be reported during after-hours support. Urgent problems are down-time and serious response time issues with system-wide or building-wide services (except GetIt). See the Technology Help Page for more information: <https://www.scls.info/technology/help>

## Data Services

**Peer library comparisons:** This month I've been working on automating the process to identify peer libraries using Wisconsin Public Library Service data. The idea is to measure the similarity of libraries across ten 'input' dimensions including service population, annual hours, library size, staff characteristics, and revenue. The process I've developed borrows a concept from the machine learning technique known as k-nearest neighbors. I first standardize the data, then use a function from a Python programming language module to measure the Euclidean distance between a given library and other

libraries, either throughout the state or within SCLS. After that, I select the ten libraries closest to the library of interest and create an Excel file showing how the libraries compare on output measures such as Director salary and weekly hours, total librarians, total employees, and staff expenditures. The results can be used by libraries looking for new directors who want to gauge their salary offers. With an automatic process, I can produce the output files on demand.

**Data visualizations for strategic planning documents:** I was introduced to the strategic planning process and the list of charts, tables, and other data visualizations SCLS can provide for individual libraries' reports. I am looking to standardize the processes used to create the basic graphics which will hopefully leave more time to address customization requests.

**MyPC bookings report:** Oregon Public Library requested a report on MyPC bookings with details on user age groups to understand the demographics of library computer users. I was able to collect historical data back to 2015 and provide the library with monthly breakdowns by age. I added a brief analysis of the variation in monthly proportions for each age group as well as a visualization showing how the proportions varied over time.

- Tim Drexler

## Scripting and Reports Team

**Monthly stats summary report:** In response to a library notification, Cindy Weber noted a significant discrepancy between the count of items borrowed and the count of items loaned on this monthly report. The Scripting and Reports Team did some collaborative investigation, and Cindy was later able to trace the problem and correct it for future report runs.

**Automating data file duplication:** Following a Team discussion at our meeting in early March, Brian Hahn began developing a Python script to automate the process of copying monthly Bibliovention extract files to multiple locations. The first version of the script will require manual initialization, but should eliminate the time typically spent copying and pasting the somewhat large data files.

- Tim Drexler

## Zoho Assist

In August, 2020 SCLS purchased Zoho Assist for SCLS member libraries. We have tracked use for these subscriptions and there have only been 11 sessions in the last 6 months. SCLS is planning to cancel this subscription by August, 2022. Individual libraries will be notified.

## SCLS New Building

### AV Vendor Selection Process

Between December 20<sup>th</sup> 2021 and March 18<sup>th</sup> 2022 Craig worked with three vendors to provide the new building with a AV system which consists of the following.

- Crestron video conferencing Platform for the meeting rooms
  - In ceiling microphones and speakers
  - High end web camera

- Sensor to auto detect when the meeting room is 1 or 2 rooms
- Two hearing loops in the meeting rooms
- Installing, mounting, and programming the two 80" TVs in our meeting rooms
- Video conferencing solution for the two larger huddle rooms
- TV in the lobby
- Two TVs mounted with digital sign hardware in the sorting room

Four vendors (Fearing's, AVI, J&K Security, and Heartland Business Solutions) were contacted for quotes with only three vendors responding. AVI declined to participate.

The deadline for receiving the bids was noon on March 17<sup>th</sup>. All three vendors were able to provide quotes in the time allowed. After considering a few factors, price being the main one, it was decided accept the bid from Fearing's.

### **Security System Vendor Selection Process**

On March 1<sup>st</sup>, 2022 Craig and Kerrie G began interviewing companies to provide our new building with a security system. The three vendors (Fearing's, J&K Security, and Heartland Business Solutions) who responded to our AV bid also provide security systems, so they were all asked for a security system proposal.

The alarm system plan consists of the following

- Alarm System
  - Contact Sensor on all exterior doors, including the 5 overhead doors
  - 6 motion sensors on the interior of the building
  - 2 pin pads for arming/ disarming the system
- Access Control (card swipe)
  - Auto door unlocking
  - Emergency lockdown button
- 2 video cameras located on the exterior of the building
- 2 Doorbells that will ring in Mechanics workshop and the sorting floor

Our current vendor, Capital Fire and Security, was also contacted to provide a proposal but they declined to participate.

The deadline for receiving the bids was noon on March 17<sup>th</sup>. All three vendors were able to provide quotes in the time allowed. After considering a few factors, price being the main one, it was decided accept the bid from Fearing's.

### **Server Room**

In March, 2021 the technology system administration team began meeting with Access Inc. to design a server room for the new building. This month the plan was finalized. The design of the server room is modular to allow us to expand as needed. It will include a gaseous fire suppression system; a thermal management system to control the heating and cooling; emergency ventilation fans; a containment solution to prevent hot and cold air from mixing; new networking racks for most server room equipment; a monitoring system; critical uninterruptable power supply; and a power distribution busway. There will also be a generator which will power the server room and other emergency systems

in the building. Having a robust server room is important as it hosts the core of the SCLS wide-area network and server systems. SCLS is also the host for backups for other Wisconsin public library system partners.

### **Data and Technology**

In the month of March the SCLS technology new buildings team worked with SCLS staff to identify the data and technology needs for the building. This included placement of data jacks throughout the building. We consulted with Hoyos for a heat map to identify optimum placement of wireless access points. Bringing internet to the building is complicated as we have three separate sources: BadgerNet, MUFN and WiscNet. We must also accommodate library services such as Talking Tech notification which requires analog lines.

### **SCLS O365 email update**

On Tuesday, April 12, SCLS staff will be enabling [Modern Authentication for O365](#) users. We do not anticipate a service disruption. Users accessing O365 using email clients or email apps may be logged out and prompted to log in again.