

Information Services Annual Report 2018/19

Theme: Student Success and Economic Development

Prepared by: Kyle Brown, CIO

Summary

Technology is a vital component in the support of teaching, learning, and business activities. This year, as in recent past years, Information Services has seen a growing demand for both new technologies and operational support needs for existing technologies from the campus community - this is reflected in the volume of requests and complete project lists. The list of accomplishments below is not exhaustive but highlights significant projects and trends of this year.

Helpdesk

The Help Desk continues to generate support request tickets via telephone, e-mails, and walk-in traffic. During the period of July 1, 2018 – June 30, 2019 there were over 5,000 tickets created in PerfectTracker with 90% of these generated by the Help Desk technicians and student support staff.

The Help Desk continues to provide support and collaborate with various campus offices to provide efficient resolutions to support requests. According to our PerfectTracker ticketing system, the Help Desk closed 61% of all resolved tickets from July 1st, 2018 – June 30th, 2019.

CARC Presentation and Streaming System

The Help Desk provided multimedia support for over 100 events occurring on the campus. The presentation and streaming system in the CARC were utilized for the main annual campus events. With support from the Help Desk Technicians and collaboration with the appropriate party(s), this system also played part in appealing prospective students during open houses and prospective donors during Alumni visits.

Mobile Streaming Cart

The Learning Spaces Technician has proven to be a positive addition to the Help Desk and has strengthened the support and offerings we can provide. There continues to be increasing demand for streaming\recording events within venues not properly equipped to handle such requests. Our Learning Spaces Technician has provided support for these requests by utilizing our campus mobile streaming carts. This is a great use of campus resources and affords the Help Desk the mobility to provide this campus support.

Flex Classroom Support

The Help Desk and Learning Spaces Technician supported an increasing number of faculty members within the campus Flex classrooms and experienced no major disruptions to student experience.

Migration to Windows 10

As the Help Desk continues to support all faculty, staff, and academic use computers throughout campus, we work towards completing our year-end goal of complete elimination of Windows 7 based PCs. This has resulted in over 250 PCs migrated to Windows 10 from July 1st, 2018 – June 30th, 2019.

Student Lifecycle – 2019

- 75 laptops for deployment to library laptop carts, Nevaldine Hall & other
- 125 high-end PCs for student access areas in Nevaldine Hall
- 52 high-end workstations for deployment in Nevaldine Autodesk-usage labs
- 6 high-end workstations for deployment in Nevaldine Mechatronics lab

Multimedia Upgrades/Improvements/Other

- MAC 620 – technology upgrade – July 2018
- Nevaldine South 133 ESports lab technology installation – July 2018
- Wicks Hall 201 SMART TV/web cam install for Psychology lab – July 2018
- New Crestron gear installed in NN102 – January 2019
- Additional audio cables installed in P124 & NN113 for enhanced Panopto remote recording option.
- Cook Hall digital signage addition – May 2019
- Cook Hall 111 – enhanced teaching technology installed for TComm – April 2019
- Worked alongside our technology vendor engineer to establish a plan to acquire portable mixers for our two existing streaming carts per request. These were ordered, installed and are working successfully as planned – October 2018

Multimedia Projects in Progress

- Kingston Theater audio upgrade – including, but not limited to coordinating space availability, vendor site visits, vendor phone conversations about the project and organizing campus kick-off meeting for the project – anticipated completion June 2019
- Cook Hall 133 Early Childhood converged modality installation
- Cook Hall 100 – working on changing out some of the existing equipment that is not functioning and updating with a cable-ready SMART TV.

- Wicks Hall 211a – SMART TV installation for conference room – PTA/Sports Management faculty space.
- Wicks Hall 213 – SMART TV installation for student presentations.
- NS138 – Mechatronics Lab – potential tech equipment installation.
- NN124 & NN124 – Cyber Security & CIT/IS labs – potential tech equipment installation.
- Dana Hall – tech equipment configuration and ultimately the installs during building renovation.
- Additional portable streaming carts have been ordered for the CSOET (3) – May 2019
- Wicks 102 Lecture Hall renovation – planned for winter break 2019-20

Systems and Security

New Server Deployments

- Windows Server 2016 virtual server to support printing for the Library's Alma system. [Brian]
- Two Windows Server 2016 virtual server for test and production Starfish. [Joe/Tom/Brian]
- Two Linux virtual appliances for AlertLogic intrusion detection [Joe]
- Ubuntu virtual server for the open-source Avahi which will be used to support Apple TVs.
- Windows Server 2016 physical server for central logging of Windows server events. Server and storage array were previously retired hardware that was repurposed. [Joe]
- Linux physical server for Security Onion intrusion detection. Server was previously used for Full Measure and repurposed. An Ubuntu virtual server was also deployed as a sensor. [Joe]
- Windows Server 2016 physical server for Microsoft Advanced Threat Analytics. Server was previously used for Full Measure and repurposed.
- Windows Server 2016 physical server for testing Systems Center Operations Manager. Server was previously retired. [Joe]

Server Deployments to Support Upgrades/Migrations

- Four Windows Server 2012 R2 virtual servers for test and production ADFS 3.0 environment. [Brian]
- Windows Server 2016 virtual server for College Association's Micros upgrade. [Brian]
- Windows Server 2016 virtual server for upgrade of Windows Update server [Joe]
- Two Windows Server 2016 virtual servers for test and production BDMS [Joe]

Retirements

- Sophos servers
- With the rollout of Windows Defender ATP as our anti-malware solution, virtual servers involved with Sophos on-premise management were destroyed to reclaim resources. This included the management server, NEMESIS, the two gateway servers (SOPHOSGW01/02) and the Sophos virtual appliance that managed four servers that were using the virtual agent for the cloud Sophos. Two servers remain, SOPHOSEC which is the on-prem update server for the Sophos Cloud solution as well as running the AD Sync tool for Sophos, and SOPHOSDP01, which was a

former update server for the on-prem version of Sophos but now only exists as the Radius authentication for the Cisco ASA VPN, which will be going away.

- College Association TimeClock
- In early May, the College Association's Time and Attendance, TimeForce, was migrated to the vendor's hosted solution. The CA-TIMECLOCK virtual server is shut down and will soon be destroyed.

Ongoing Projects

- Windows 10 rollout - The computer labs have been on Windows 10 since the previous year. They were deployed with the Long-Term Service Branch (LTSB) version. For this coming fall, the labs are being deployed with Windows 10 Education, since Microsoft's continuing support for LTSB is in question. The Windows 10 rollout to faculty and staff continues via rebuilds and new computers this summer. A check of System Center on 6/10/19 reports approximately 152 Windows 7 clients, down from just over 400 this time last year. [Joe]
- Banner 9 SSO - The production EIS instance was deployed and Banner PROD for INB is now authenticating via EIS/ADFS. The EIS test instance had already been working on Banner CONV but Banner TEST was added to it. [Brian]
- BDMS - The BDMS test and production instances were migrated to Win 2016 virtual servers to replace the existing Win 2008 R2 virtual servers. In addition, the version of BDMS was upgraded so it was compatible with Banner 9 [Joe/Kevin]
- AlertLogic - In August, onboarded with AlertLogic intrusion detection. The current infrastructure consists of two AlertLogic servers on-premise monitoring thirty of our servers. Since deployment, AlertLogic has recorded 234 incidents of varying degrees. Typically it has been vulnerability scans of our public facing web servers, primarily our campus website and Wordpress site. The Wordpress site is also subject to SQL injection and brute force attacks. There are also alerts regarding Sinowal infections based on DNS queries. Tracking those down to an infected client have proven difficult and may improve once we have additional threat analytics deployed internally. [Joe/Brian]
- ADFS Upgrade - A test ADFS 3.0 instance was deployed, in part because of issues with authenticating the test and prod Starfish instances. In addition to the test Starfish trust, the test EIS trust and the test SUNY trust were moved to the test ADFS 3.0 instance. A production ADFS 3.0 instance has been deployed and is currently in the final phases of testing with a cutover mid-June. [Brian]
- Windows Defender ATP rollout - The migration from Sophos to Windows Defender ATP continues. The computer labs have been on Defender and staff are in the process of being moved over as well as the servers. A check in the Sophos Cloud console on 6/11/19 shows 255 devices reporting activity in June. Those numbers should continue to drop as new faculty/staff computers are deployed by the Help Desk. There are 44 servers reporting active with Sophos but those numbers will also continue to drop. Any new domain-joined server that is deployed will be using Defender. We still need to determine how we can manage Defender on non-domain joined servers such as those in the DMZ. [Joe/Brian]
- Starfish - Worked with Hobson's team to configure ADFS authentication for both test and prod Starfish instances. [Brian] Two Win 2016 virtual servers deployed for data transfers for Starfish, one for test and one for prod. Tom worked with Joe on the initial deployment and Brian has taken over with Tom's departure. [Joe/Brian]

- Alma - Worked with Ex Libris team to configure ADFS authentication for the Library's new Alma management system. [Brian] Currently working to deploy an email printing solution for Alma as that is how they will receive their reports. [Brian]
- Maxient - Worked with Maxient team to configure ADFS authentication. [Brian]
- Adobe - Adobe creative cloud management and federation for shared desktop licenses and named instances has been configured. We are waiting on the SUNY contract for deployments. We have currently only been able to test in limited fashion.[Joe]
- KnowBe4 - Onboarded with KnowBe4 through the SUNY SOC offering. Policy decisions need to be made with HR. [Brian/Joe]
- Surveillance camera expansion
 - (2) in Nev North 119 and (2) in Nev South 133
 - (2) in Newell
 - (3) each in the basements of Heritage, Rushton and Mohawk
 - (20) in Chaney
 - We now have 139 cameras in our Genetec surveillance system.
- Security Onion - Security Onion open-source intrusion detection has been deployed in a starting configuration to detect security anomalies. The current set up may need to be increased with a separate storage server due to the number of logs. [Joe]
- Central logging - For many of the servers, advanced windows logging has been enabled and Windows events are forwarding to a central log server. Advanced logging has also been configured for clients for incident response/auditing but are not being centrally logged at this time (being investigated). [Joe]
- Kemp Web Application Firewall - The external Kemp load balancer cluster includes the web application firewall module. Currently we are proxying the following sites through it:
 - www.canton.edu
 - www2.canton.edu (secured docs)
 - news.canton.edu (Wordpress server)
 - tutortrac.canton.edu
 - password.canton.edu
 - events.canton.edu
- Since being put into production, the WAF has recorded 140,000+ events, which can be a variety of threats.

Telecom

- Expanded Telstrat Engage call recording capabilities to the Information Services Help Desk and University Police
- Provided enhanced custom call accounting reports to various campus departments such as the One Hop Shop and Admissions

- Relocated Emergency Communications Team telephone technology to the new location in University Police suite
- Provided comprehensive training to new ECT members and University Police staff
- Made significant strides in our copper infrastructure rehab project
- Assisted in the facilitating of the process of the Verizon macro cell installation with Facilities and contractor
- Provided new IT Operations Assistant consultation regarding telecom vendors and better understanding of telecom carrier statements
- Managed a low-cost conversion of existing analog licenses to digital to avoid expensive purchase of new digital licenses
- Created relationship with Homeland Security to provide Wireless Priority Service, through Verizon Wireless, to our University Police Department. This WPS prioritized calling over the LTE network and an alternate calling route in the event that the LTE bandwidth is congested
- Maintained a consistent and high level of response to campus needs- Moves, adds and changes, campus capital projects

Ongoing Projects

- Replacement of old RG11 coaxial infrastructure that is vulnerable to signal ingress or egress
- Installation of new coaxial infrastructure to locations in need on campus
- Removal and replacement of RG59 coaxial service drops
- Rehabbing of existing copper wiring panels
- Conversion of analog to digital licenses as needed to support system expansion
- Transferring users with analog connections to our digital phone platform
- Homogenizing Faculty and Staff digital phone assignments
- Audit of elevator locations- Infrastructure paths, floorplans, phone types

Enterprise Applications

Breakdown of Day-to-day/Ad Hoc Tasks Completed:

Banner	1151
Administrative	609
Other Systems **	59
Account Setup	239
TOTAL	2058

Projects/System Enhancements Completed:

- Day-to-Day/Help Desk Requests (refer to stats in prior page)
- Banner 9 Admin migration

- BDM Upgrade from Version 7 to Version 16
- Linux Upgrade
- Workflow – Course Change First 3 Days
- EMS
- Student Outcome Tracking
- Degree Works VTC Migration
- Maxient Migration
- Alumni Weekend Registration Portal 2019
- Gender Studies Conference Registration 2019
- Banner ID Photo Configuration
- Global Proxy in SSB
- Banner Feed to HR Acuity
- Academic Works Phase 2 – Scholarship Information from AW automatically updates Banner FinAid
- CashNet Migration – Dynamic Billing – Infrastructure is ready, billing to commence in a few days
- Continuing project to convert processing tasks to self-service so users can do it themselves. Also convert processing tasks to be more autonomous so programmer intervention will not be needed. For example, programs that self-advance to the next term. For this year, beneficiaries include SAS and Public Relations.

Ongoing Projects:

- Starfish Implementation
- Slate Implementation
- SUNY Online Implementation
- Banner Feed to Alma
- Workflow – Course Change Beyond First 3 Days
- Workflow – Change of Major
- Workflow – Leave of Absence
- Workflow – Readmit/Academic Forgiveness
- Academic Works Banner Integration
- PageBuilder Web Development for SSB 9
- SQR Migration
- Streamlining/Automation of Backend Processes
- Operations Documentation
- SUNY Collaborative Reporting Implementation

Pending Projects:

- Student Comments in UCanWeb
- BDMS Alumni
- Auto-alert when Basis job goes down
- Standards of Academic Progress (SAP) automation
- DegreeVerify
- Enrollment Verification
- Banner 9 Migration – SSB
- Account Creation Rewrite
- ASC 2019

- Workflow – Change of Minor
 - Advancement CRM
 - Argos
-

Networking

Infrastructure Upgrade Project

- NYSERNET router installed and 10gb connection established
- Continue refinement of NAC policies to improve security and expand connectivity
- Moving to new Palo Alto solution for VPN connection
- Cutover to new equipment continues.
 - Areas cutover to new wired equipment”
 - Halford Hall
 - Kennedy Hall
 - Smith Hall
 - Rushton Hall
 - Nevaldine 104A data closet (the other two data closets are partially cutover)
 - Library first floor
 - Portions of Library basement
 - Payson Hall first floor
 - Mac Hall 2nd and 3rd Floors. Portions of 4th, 5th and 6th floors (one of two switch stacks in Room 511 data closet cutover)
 - Chaney dining
 - Areas where new equipment is in place ready to be cutover:
 - New Campus Center
 - Old Campus Center
 - Cook Hall
 - Payson Hall 2nd floor
 - Libray basement and 2nd floor
 - Cooper Service
 - Mohawk Hall
 - Mac Hall Lobby
 - Newell Vet Tech
 - Wicks Hall 1st and 2nd floors
 - Areas cut over to new wireless:
 - Library
 - Nevadline Hall
 - Old Campus Center
 - CA office areas in the lower area of Campus Center
 - Kennedy Hall
 - Payson Hall

- Cook Hall
 - Wicks 1st and 2nd floors
 - Newell Vet Tech
 - Smith Hall
 - Rushton Hall
 - Chaney Dining (3 APs in operation.)
- New APs have been installed in these areas, still need to install supporting edge switches:
 - French Hall
 - CARC
 - Wicks Basement floor
 - Heritage hall
 - Substation