Information Technologies Activity Report

May – September 2017

Transition to Canvas (T2C): Canvas LMS replacing Sakai

UD Information Technologies (IT) has formally announced that Sakai will be retired on Dec. 22, 2018. (Read this *UDaily* article.) UD currently supports both Sakai and Canvas, but has launched the Transition to Canvas (T2C) initiative to move the University to one system.

By the end of the fall 2018 semester, the University plans to move all Sakai courses and projects to Canvas or other platforms. (Learn about the reasons the University is moving to Canvas.)

IT Academic Technology Services (IT-ATS) has been preparing faculty and staff for T2C since August's Faculty Commons Keep Calm and Teach On (KCTO) workshop series.

IT-ATS has developed a comprehensive T2C website to help faculty and staff during the transition. The website includes instructions for moving content from Sakai to Canvas and self-service resources for learning how to use Canvas.

The T2C website also includes information about hands-on training sessions for faculty and staff. In addition, faculty can request one-on-one consultations or departments can request workshops for their faculty using the T2C consultation request form.

Faculty and staff currently using Sakai should have received email with a link to a questionnaire about migrating their courses and projects to Canvas or other platforms. IT-ATS and other Faculty Commons partners will use survey responses design training and to gauge faculty interest in an automated course migration tool.

For more information, visit the T2C website.

Penguin selected as vendor for UD's third HPC cluster

Over the last year, IT staff have been working with faculty, research staff, and vendors to design the next high-performance computing (HPC) community cluster. Penguin Computing's Tundra Extreme Scale (ES) design met all of the University's design goals and was priced to maximize the value of our investment in this critical research resource. (See the Design and Policies document for more details on the University's HPC goals.)

This successor to the Mills and Farber HPC clusters will pack more computing power into less physical space, use power more efficiently, and leverage reusable infrastructure for a longer overall lifespan. Several leading HPC vendors provided supporting information in late 2016 which, together with input from University faculty and staff, led to a finalized design proposal that became a formal request for proposal (RFP).

The project reached a major milestone with the announcement at the September HPC Symposium of Penguin Computing as the vendor for the next community cluster.

Penguin's Tundra ES design follows the specifications of the Open Compute Project, an initiative to standardize the construction of compute hardware and the racks that hold that hardware.

The next community cluster will use Intel processors, as the current Farber cluster does. The first generation of nodes will feature two 18 core Intel Xeon E5-2695 v4 processors, nearly double the number of cores than in Farber's compute nodes. Even though all component hardware in Penguin's Tundra ES design is significantly more advanced than Farber's components, the pricing model and value-added benefits in the new community cluster are anticipated to remain the same, and support will continue to be provided by UD IT HPC staff.

More information about the new cluster is available at the IT Research Computing website. Questions can be emailed to it-hpc-interest@udel.edu.

Information Security

October is National Cyber Security Awareness Month

This October is the 14th annual National Cyber Security Awareness Month (NCSAM), a joint effort between the United States Department of Homeland Security and the National Cyber Security Alliance to educate the public about safe computing and information practices. Throughout October, the government and more than 1,000 public and private organizations nationwide will champion cyber security.

The University will observe NCSAM with weekly *UDaily* articles highlighting important security topics for both daily and work life. NCSAM is also an opportunity to revisit resources available to help you protect yourself and our community, including Secure UD Training and the Secure UD Threat Alerts blog.

Secure UD Training

Phase II of 2017 Secure UD Training, a security awareness resource for University employees, has now been released. The training empowers employees by equipping them with the knowledge and skills to protect themselves and our community from cyber threats. Its modular, online, self-paced design makes it easy to complete during lunches or between emails. The skills it cultivates are applicable at home, in the office, or abroad.

Almost 1,600 employees have already started or completed their 2017 training. Unit heads may request reports of Secure UD Training completion within their units by emailing secadmin@udel.edu.

To start Phase II of your 2017 Secure UD Training, log in through the Secure UD website.

Secure UD "Take a BITE out of phish!"

Earlier this year, the University launched the Secure UD "Take a BITE out of phish!" campaign to help raise awareness about phishing, one of the world's most prevalent cyber threats. Each month, a randomly-selected sample of employees will be presented with a harmless test phish that mimics real attacks launched against the University community. The tests are non-punitive, but employees are strongly encouraged to treat all suspicious emails as potentially dangerous. Test phish are annotated and posted to the Secure UD Threat Alerts blog.

As part of the University's phishing awareness efforts, IT has also created reportaphish@udel.edu, an inbox to which any community member may forward suspicious emails.

Remember "BITE":

- Be aware of the threat
- Identify the warning signs
- Tell us about suspicious messages
- Erase phish from your inbox.

Prizes

IT will host a prize drawing to thank those who demonstrate their commitment to the security of our community this month. Employees can earn up to two entries just by practicing routine, security habits:

1. Complete Phase II of 2017 Secure UD Training in October.
2. Forward October's Secure UD "Take a BITE out of phish!" test email to reportaphish@udel.edu.

Winners will be drawn during the Tech Fair on Nov. 15.

Apple device management: JAMF training

In late spring, a group of approximately 30 IT staff members from over a dozen units across campus participated in a 30-day trial of JAMF Apple device management software. The product proved to be effective, and UD IT subsequently purchased 2,500 licenses for use across campus. A three day "jumpstart" (immersive training session) was held for the participants. Training sessions are now being planned for other departmental IT staff interested in using JAMF.

CrashPlan news

After implementing Code42 CrashPlan Enterprise on over 200 systems over the past year, IT Client Support & Services (IT-CS&S) is now making the cloud-based backup solution available to University units. In our implementation, all files are encrypted on the local device before being backed up to cloud-based Code42 servers. Encryption keys are stored on a highly secure server located at the University so that data leakage due to theft of the backed-up files is nearly impossible. The cost is $78 per person (for up to five devices per person), the Internet2 discounted price. Quarterly buy-in is available. (See more detailed information.) Departmental IT staff should contact the IT Support Center to subscribe their unit's systems in the University's CrashPlan program.

Code42 has announced that CrashPlan for Home is being discontinued. Code42 is dropping this product to focus on enterprise and small business solutions. Current customers will be supported through October 2018 but should make other arrangement for backing up personally owned systems.

Infrastructure

Changes to UD Wi-Fi

On August 1, eduroam became the only secure Wi-Fi network on campus when UDel Secure was retired.

Eduroam is "education roaming" Wi-Fi that brings secure internet access to thousands of institutions in over 70 countries. Eduroam users do not need guest credentials to log in to Wi-Fi at participating institutions. For example, UD students studying in Spain could use their UD credentials at an eduroam institution, and a visitor from Spain could use his or her eduroam credentials at UD.

The new configuration of UD Wi-Fi also allows students and employees to securely share devices (for example, wireless printers and Apple TVs) using the UD Devices Wi-Fi network. Visitors to campus can join the UDel_Guest Wi-Fi network for limited periods of time. These services had not previously been available.

For more information, go to www.udel.edu/eduroam.

SharePoint transition

The University's centrally hosted Microsoft SharePoint installation was transitioned from a locally hosted platform to Microsoft's Office 365 cloud-based solution over spring semester. The cloud-based solution offers nearly unlimited storage across redundant servers at no cost to the University. This migration has allowed UD IT to shift hardware, personnel, and resources to other University projects.

Distributed antenna system

The distributed antenna system (DAS) designed to improve cellphone service across campus is nearing completion.

Nodes on central campus (north of Cannon Hall, east end of Laurel Hall, west of Harrington Beach, South of ISE Lab, corner of South Chapel St. and Wyoming Road, and others) are slated to be brought online in November. Initially this will improve cellular services for Verizon Wireless in The South Green residence halls (Warner, Cannon, New Castle, Kent, Sussex, Squire, Smyth, Caesar Rodney and South Academy) and the residence halls surrounding Harrington Beach (Lane, Thompson, Russel, Harrington, Redding, and Gilbert).

Constituent Groups & Feedback

Tech Fair: Nov. 15

Save the date! Plan to attend the 2017 UD Tech Fair on Nov. 15, in the Multi-Purpose Rooms at the Trabant Student Center. Details will be announced in *UDaily* and on the Tech Fair website.

The annual Tech Fair provides an opportunity for faculty and staff members to familiarize themselves with the technology services offered by several different University units. Staff members who provide technology support and manage central systems will be available for questions, short discussions, and hands-on demonstrations of technology tools.

Unconference Recap

IT hosted another successful Unconference in June. Approximately 90 IT professional attended the half day event, which started with an overview of Office 365 and OneDrive. Participants then electronically submitted and voted on topics discussed during the rest of the event.

Another meeting for departmental IT staff will be scheduled for late October.

Research Support

Mills HPC cluster retiring in 2018

The purchase and installation of the next HPC community cluster in the University's data center provides motivation to move to the next stage in the Mills end-of-life plan. The Mills cluster, purchased in 2012, exited its official support period at the beginning of 2017. The

cluster has remained functional in a production capacity since that time, with 13 nodes (about 6%) removed from service following irreparable failure.

Later this year, in preparation for the installation of the next community cluster, a number of hardware racks will be removed from the Mills cluster. Mills will remain functional in a diminished capacity for a period thereafter. Sometime in 2018, the remainder of Mills will be consolidated to a single rack and the login node will be rebuilt to function solely as a means for users to access the Lustre and home directory storage of that cluster for a limited time.

HPC Symposium

The September 2017 HPC Symposium session (Sept. 27) included two presentations, one by IT Research Computing staff and one by Jeff Frey, IT Network and System Services (IT-NSS), and Zubaer Hossain, assistant professor of Mechanical Engineering, and his research group.

First, IT Research Computing staff announced the plans to use Penguin Computing's Tundra Extreme Scale (ES) design for the next HPC community cluster. They also reminded attendees about upcoming HPC workshops and the advanced training available by request.

Second, Frey opened the presentation about Hossain's research by discussing the specific software build and workflow process he developed for Hossain's research group. Hossain's presentation, "Quantum-Continuum Design of Ultratough Nanocomposites," addressed the role of computer modeling in designing materials, specifically, nanoscale mechanisms and mechanical properties for designing lightweight nanocomposites, thin-film photovoltaics, and van der Waals heterostructures. The group also described how they are using Rclone to sync files and directories to and from various cloud services. (Rclone is now available on Farber.)

This presentation was one of a series of meetings designed for researchers using or interested in using the University's HPC clusters. Those interested in presenting at a future HPC Symposium should email it-hpc-interest@udel.edu.

GIS events

- **Community coffee hours:** This fall, IT-CS&S will continue hosting coffee hours for the UD Graphic Information Systems (GIS) community. The next GIS coffee hour will be Tuesday, Oct. 10 at 10:00 a.m. in Faculty Commons, 116 Pearson Hall. The technical presentation will be given by Geri Miller (from Esri) on "New ArcGIS apps: ArcGIS Pro and Insights for ArcGIS." Following this presentation there will be an open discussion about current issues in GIS. For more information, email Olena Smith, IT-CS&S.

- **GIS Day**: IT-CS&S and the University Library will host GIS Day on Thursday, Nov. 16, in the Perkins Student Center Gallery. More details will be posted on the UD GIS website.

Call for research: posters and links

The IT Research Computing team encourages Mills and Farber stakeholders to submit their research to the Research Computing website gallery. Contributions to this gallery allow the Research Computing group to highlight the importance of funding future University HPC clusters. These research publications show, in part, how much research has been accomplished using UD's HPC community clusters and the clusters' vital importance to the UD research community. You can submit links to your papers, images, or poster sessions using the online Research Submission Form or submit other file types to Anita Schwartz (researchcomputing@udel.edu).

Training offered for University researchers

The Research Computing team hosted the UNIX Basics series over the summer and the XSEDE MPI Workshop in early October.

- The Unix Basics Series covered several topics including Unix/Linux for beginners, the vi text editor, and getting started with the Farber community cluster. Over 50 people attended the four sessions and received hands-on assistance. Materials used during these sessions can be found at the HPC wiki.

- The two-day XSEDE MPI workshop, held October 3-4, 2017, gave C and Fortran programmers a hands-on introduction to MPI programming. Attendees left with a working knowledge of how to write scalable codes using MPI, the standard programming tool for scalable parallel computing.

- Information on November and December XSEDE workshops is available at the Research Computing website.

Teaching and Learning

Keep Calm and Teach On 2017

Staff from over 15 units and colleges led 40 Keep Calm and Teach On (KCTO) sessions between August 15 and 24. More than 100 faculty members and graduate teaching assistants accounted for more than 300 KCTO session registrations.

KCTO is a series of training sessions designed to help all those who teach at UD prepare for the upcoming semester. Session topics included Canvas, class activity assessment, advisement, and integrating career development into a course. Offerings by primary Faculty Commons' partners (IT-ATS, Center for Teaching and Assessment of Learning [CTAL], UD Library, and IT-CS&S) were supplemented by relevant contributions from seven UD faculty members and staff from IT University Media Services (IT-UMS), Disability Support Services

(DSS), UD's Counseling Center, Office of Educational Technology (OET), Study Abroad, First Year Seminar (FYS), the Registrar's Office, and Undergraduate Advisement.

Business Systems

Web forms and business applications

Equipment Activity: Return to Campus
The University tracks the return to campus of off-campus equipment. Based on a need identified by departments, the Equipment Activity Web Form has been enhanced to allow an equipment tag number to be entered to initiate a return. Previously, the Web Form request ID associated with equipment's move off campus was required to initiate a Return to Campus form. This change also accommodates the return of equipment that was transferred off-campus without a Web Form.

New Excused Absence Notification Web Form
The Excused Absence Notification form has been added to the Web Forms system. IT-Web Development (IT-WD) partnered with the Office of the Registrar for this change, as part of the launch of the Blue Hen Success Collaborative (BHSC). Assistant deans who look for the Excused Absence Notification form in its former location in the Advising Notes Manager will be redirected to the new Web Form.

The new Excused Absence Notification Web Form still includes the absence date and a customized message for a student's instructors. However, instead of receiving the results in email, instructors will need to log in to Web Forms to view the absence information. This process ensures the security of private information that may relate to a student's absence.

Courses Search update
Courses Search allows students to search for course information for current, future, and past semesters. The Courses Search application was updated to include additional search options for Capstone Requirements, map links with improved accuracy, and a link to My UD in the navigation bar. In addition, the application was upgraded to use the responsive Bootstrap framework, making Courses Search more mobile friendly.

Haven and AlcoholEdu
Before the start of the fall 2017 semester, IT-WD collaborated with the Office of Equity and Inclusion and the Office of Student Wellness and Health Promotion to move those programs behind UD's Central Authentication Service (CAS). "Haven: Understanding Sexual Assault" is a program required for all incoming students and new employees. "AlcoholEdu," an alcohol misuse prevention program, is mandatory for all incoming undergraduates under the age of 26.

Previously, access to the AlcoholEdu and Haven programs was through the old UD Network page. IT-WD set up a database to manage students and employees required to complete the programs. Now when a user tries to access one of the new Haven or AlcoholEdu programs, they are required to authenticate through CAS, and if their ID is included in the new database

they will be allowed to access the appropriate programs. Additionally, IT-WD now maintains and sends reminder emails about these programs to both students and employees

Photo Roster
IT-WD recently partnered with the Office of the University Registrar to update Photo Roster, an application which permits faculty to view the UD ONEcard photo of students enrolled in courses they are teaching. Updates included adding responsive design and a new search feature that allows authorized users to request the photo of a specific student or subset of students. The new search feature can also filter results for larger course sections. Prior to the update, faculty could only view a single student photo at a time. Now, faculty can view a course's complete photo roster.

Database Administration (DBA) report

PeopleSoft and software upgrade
The Financial Accounting PeopleSoft Tools and application software is being upgraded to the latest version. Currently, changes have been made in the test environment. Updating the production version is scheduled for spring 2018.

PeopleSoft databases moved

- The Financial Accounting PeopleSoft production database will be moving this month to the new Supercluster hardware environment. It will join the Campus Solution student administration database which has been on the Supercluster since July. As a result of the move, users should see noticeable performance improvements.

- The UD Time test and production Oracle databases have been moved to new Linux-based servers that have improved performance and have allowed more consistent procedures for backup and recovery, as well as on-demand rebuilding of test databases to improve testing procedures. The same processes and environment changes have been completed for the BSR/Advance application for alumni processing requirements.

UDSIS updates

- BHSC Phase II was rolled out to campus in late September, and enhancements to support the rollout are in place. IT Management Information Services (IT-MIS) worked with the BHSC office and the Registrar's office to get the data into the system to support this rollout.

- Data extracts for the Maxient implementation were put in place by IT-MIS in collaboration with the Registrar's Office. Document migration from the Dean of Students office system, Symplicity, to the new system, Maxient, is currently in progress.

- IT-MIS worked with the OISS office to implement extracts of SEVIS data from UDSIS to Terra Dotta Systems for more efficient processing of international student/scholar data. The Terra Dotta system is now in production.

- UDSIS was recently upgraded to PeopleTools 8.55. The new tools version puts us in position to upgrade UDSIS to PeopleSoft version 9.2, which will provide new and enhanced features for the students, faculty, and staff.

Financial systems update

Cash management implementation
IT-MIS deployed the PeopleSoft Cash Management (Treasury) module for the Cashier's office in June. With this module in place, cash forecasting, cash positioning, fund transfers, and wire payments can be done within the PeopleSoft Cash Management module. The Cashier's office is now able to automate the bank statement reconciliation process with enhanced business rules.

At the same time, IT-MIS also deployed PeopleSoft Financial Gateway functionality for the Procurement office. This functionality centralizes payment processing. It is a single platform for processing all payments and receipts from payables, receivables, and third-party systems.

Facility online manager billing
IT-MIS has automated the Controller Office's process of creating journals for the UD NanoFab Facility. The new process Integrates NanoFab's application "Facility Online Manager" (FOM) with the PeopleSoft General Ledger application. This process notifies the departments with chartfield exceptions and provides the capability to correct those exceptions online.

Incremental data warehouse load for UDataGlance
To improve "All Funds" report performance on UDataGlance, IT-MIS has built a data warehouse in PeopleSoft Financials and an incremental load process to update that warehouse data every night. After each update is completed, the warehouse data will be moved into the report instance for UDataGlance users to access. This new process will reduce concurrent data access on the production database, thereby improving performance.

Tic and Tie comparison reports
IT-MIS has developed a new report to compare General Ledger balances in production with data warehouse tables in the report instance of UD Financials, thereby validating the accuracy of data warehouse tables each night. Existing "Tic and Tie" reports between General Ledger and the Balances Reporting table had a flaw that generated a warning at the beginning of a new fiscal year when the prior year was still open for adjustments.

Utility to delete journals
IT-MIS has developed a utility for the Controller's office to search for and delete journals which were erroneously uploaded. This utility reduces staff effort to correct these errors.

New bill type (NIIMBL)
IT-MIS modified the non-student bill load process to generate invoices with the new NIIMBL bill type for University researchers.

Event Production and Media Services

Classroom technology

The IT-UMS Classroom Technology group completed the digital upgrade of 10 classrooms in Sharp Lab as part of the ongoing effort to upgrade classrooms with the latest in teaching technology.

In preparation for the start of the semester, IT-UMS also held five classroom technology orientation sessions for dozens of faculty members.

Performances and events

The IT-UMS Performance and Events group helped to welcome the University of Delaware Class of 2021 to campus. From the three "We Are Blue Hens" performances in Mitchell Hall to the Twilight Induction Ceremony on The South Green to the Game Day 101 Pep Rally at Delaware Stadium, IT-UMS provided audio reinforcement, video display services, and technical staffing for seven events over the course of 36 hours during 1743 Welcome Days.

IT Support Center

1743 Welcome Days

Students moving in to the residence halls had no trouble finding IT staff in their bright orange eduroam t-shirts during 1743 Welcome Days (August 26 and 27). IT staff headquartered in the Harrington Commons and George Read North Commons helped students with a range of issues including connecting wireless printers; getting access to Microsoft Office 365; connecting to the eduroam Wi-Fi network; setting up Amazon Echoes, Apple TVs, gaming consoles, and other devices; and connecting to the UD cable TV network.

In addition, staff at the IT Support Center fielded over 300 phone calls over the weekend. The entire first week of the semester was quite busy, with a peak of 757 requests for assistance coming in on August 29, the first day of classes.

Personnel

New IT staff

Marabeth "Beth" Cartwright joined IT-ATS in June. She is an Educational Technology Consultant I and will assist faculty and students with using educational technologies effectively.

Beth has many years of IT experience in both industry education. She is responsible for the day-to-day operations of UD Sakai and Canvas.

John Collins joined IT-WD in September as an Applications Programmer I. John has many years of experience working in an IT environment in private industry. He will work in the Technical Resource Group as a Java programmer working on web applications.

Shari Galgano, an Educational Technology Consultant I, started working in IT-ATS in July. Shari brings to UD her many years of experience working with education technology in the K-12 learning environment. She will consult with and support faculty to enhance teaching and learning through the use of technology.

In August, **Indijas "Indy" Subasic** started working as a Systems Programmer III in the Systems Group in IT-NSS. Indy brings his many years of experience in IT and will focus on the security, system administration, programming, and analysis of the central IT Windows services (Exchange, SharePoint, Active Directory, IIS, and SQL).

Retiring IT staff

Thank you and best wishes to these IT retirees for their many years of service to IT and UD!

- **Joy Lynam**, Director of IT-WD, retired in September after 34 years of service.
- **Rich Romanelli**, Network Engineer IV, IT-NSS, retired in September after 27 years of service.

The IT Activity Report is published 3-4 times a year. Archived reports are located at http://www.udel.edu/it/activity-reports/. If you have comments, questions, or suggestions for future articles, contact the IT Communication Group at it-commgroup@udel.edu.