

## Secure UD Initiative

In January 2014, UD Information Technologies (IT) launched the Secure UD initiative as a way to heighten the University community's awareness and understanding of computing and information security topics. Since then, the Secure UD initiative has expanded to include several programs and technologies, all of which help raise the University community's awareness of the need to keep personal and University information safe. UD IT has coordinated the improvement of the University's information security posture by working with departmental and college IT staff, directly with employees and students, and with selected third-party vendors.

Activity reports over the past three years have mentioned many of IT's security improvements—even before IT launched the Secure UD initiative. The information below summarizes the progress made in several initiatives since our last activity report and highlights some upcoming improvements.

### **Secure UD information security awareness training**

Since the spring of 2014, IT has been offering [Secure UD training](#)—a modular online program that is now the University's primary information security awareness tool. Through education about key security topics, this program empowers faculty and staff to make security-conscious decisions to protect themselves, their work, the community, and the University as a whole.

This year, Secure UD training is being released in phases (one each in January, April, and September) to help reinforce security topics throughout the year. Employees will be able complete the training in three short work sessions rather than in one long session. The completion rate for the first phase of 2016 Secure UD awareness training exceeded that for the entire 2015 training program by 24%. Even though phase two has only been available for a month, its completion rate is 3% higher than that for the 2015 training. IT has received positive feedback about the new phased approach and the updates our vendor (SANS Institute) has made to the training modules.

Have you completed your [Secure UD training](#) yet?

### **Secure UD Threat Alerts**

IT also maintains the [Secure UD Threat Alerts blog](#), which provides bulletins about information security threats seen on campus, including phishing scams targeting the University community.

### **Secure UD Student Agreement**

Since 1995, when new students create their email accounts, they have completed a brief course on cyber citizenship and responsible computing. Known as the Electronic Community Citizenship Examination (ECCE), this course was designed to ensure that all incoming students have a basic understanding of their computing responsibilities at the University.

In keeping with its ongoing mission to improve computer and information security awareness across the campus community, IT has retired the ECCE and is preparing to release the Secure UD Student Agreement. This improved, student-oriented responsible computing tutorial will reinforce key security topics and safe computing habits for all new students. Its content reflects the new direction of the University's policies and best practices for academic, professional, and personal computing.

IT will send email to students who created their UDeINet accounts after ECCE was retired. These students will be required to complete the Secure UD Student Agreement when it becomes available.

### Desktop Security Training

IT hosted a half-day Desktop Security Symposium on April 27. Jason Cash, interim vice president for IT, began the event with a keynote for the nearly one hundred IT professionals in attendance. Sessions focused on the information security policies being developed as part of the Secure UD initiative and on how best to secure data, shield clients' desktops from attack, and increase overall security without hindering workflow.

A series of follow-up sessions are being planned based on feedback from a questionnaire distributed after the event. The series will start with LAPS (Local Administrator Password Solution), an Active Directory based utility that randomizes and stores local administrators' passwords. Other topics will include AppLocker and Bitlocker deployment, an open discussion of the information security policies currently being formulated, and a unified approach to managing security on Mac OSX-based machines.

### Security Updates

Included in the Secure UD initiative are several security updates that improve the way members of the University community access their online accounts and UD services.

- **PIN retirement**

In April, IT rolled out a [security update](#) that required employees and students to update some of their security settings. PINs are being retired in favor of longer, stronger passwords, thereby enhancing the security of employee and student accounts. This update also makes it easier for members of the UD community to manage their own security settings and sets the stage for future security enhancements. As of May 10, approximately 30,000 UD community members have retired their PINs and completed this security update.

- **Two-factor authentication (2FA)**

[Two-factor authentication](#) (2FA) is a simple but powerful way to safeguard your UDeINet account and all the online information in your care. Over 1,800 UD employees have signed up for 2FA so far. Beginning on or about May 17, employees and faculty members who have not yet registered for 2FA will be reminded to do so when logging in via CAS. Employees will see periodic reminders until they have registered for 2FA.

Have you signed up for [2FA](#)? Employees and faculty members are invited to follow this [simple process](#) to enroll and set their preferences. Using 2FA provides an extra layer of protection for UDeINet accounts, for an employee's personal information, and for any University information entrusted to that employee's care.

- **New VPN security requirements**

On June 15, the University will require that people use 2FA when signing in to UD resources using [Virtual Private Network \(VPN\)](#) connections. Additionally, on June 15, faculty, staff, and students who log in to Copland or Strauss from off campus will be required to use a VPN connection.

- **New UDeINet password requirements**

In April, the University strengthened the requirements for new UDeINet passwords; new passwords must now conform to the following rules:

- Passwords must include 12 to 30 characters (formerly 8 to 30 characters).
- Passwords must include at least one character from three of the following categories:
  - Lowercase letters
  - Uppercase letters
  - Numerals
  - Special characters and punctuation.
- Passwords must not be based on a dictionary word or be an obvious variation of a word or phrase associated with the University. (New rules check for passwords like

"BlueHens2020," which technically meet the length and character requirements but are too obvious at the University of Delaware.)

Beginning in November 2016, the University will also begin requiring that passwords be changed every 15 months.

These updates to UD's password requirements will make employee and student accounts more secure against hackers.

### Secure UD branding

Moving forward, IT will use the [Secure UD logo](#) to increase the visibility of the Secure UD initiative and to make sure that security messages and offerings are delivered consistently. By increasing engagement with the University community, IT will ensure that University community members receive the tools and support they need to protect themselves, each other, and the University.

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## Planned Outages

UDSIS will be updated with the next batch of patches on Saturday, June 11. The system is expected to be unavailable until about 5:00 p.m. that day.

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## Infrastructure

### UD WAN upgrade

This winter, IT, Princeton Hosted Solutions, and Lightower Fiber Networks completed a major upgrade to the University's statewide network. The upgrade to the University's network leveraged a significant increase in fiber connections to the entire state of Delaware network. All UD locations' connections have been upgraded to a minimum of 50 megabits/second (Mb/S). Many sites' connections have been upgraded to 200 Mb/S while the Wilmington Campus connection was upgraded to 1 gigabit/second (Gb/S) and the connection to the Sharp Campus (Lewes) was upgraded to 5 Gb/S. For more information about the upgrade, read this [UDaily article](#).

### Google Custom Search Engine at UD

On April 28, 2016, UD's license for the Google Search Appliance expired.

As part of [UD's updated Web presence](#), the University's Office of Communications and Public Affairs (CPA) has released a new [University of Delaware header bar](#) that contains an optional [Google Custom Search Engine \(CSE\)](#). CSE is a free service within Google Apps at UD.

According to CPA, the UD-wide CSE should only be used in the new UD banner and headers. The code for the new headers has been released to Web developers in a UD-Branded Header and Footer code repository.

The UD-wide search collection includes all Web pages that match these searches:

- <http://www.udel.edu/>\*
- [http://\\*.udel.edu](http://*.udel.edu)
- <http://udel.onecampus.com/>\*
- <http://www.bluehens.com/>\*
- <http://udmba.com/>\*
- <http://www.udconnection.com/>\*

For more information about excluding pages from the UD CSE, using CSE promotions to replace GSA KeyMatches, and building a CSE for your department or college, review the information available on UD's [Google Custom Search Engine help pages](#).

### End of life for Drupal 6 server

As of February 24, the international Drupal community ceased [support for Drupal 6](#). As a result, we plan to take down the University's Drupal server by the end of the summer 2016 term (August 12, 2016).

Many University departments have moved or have begun to move their Drupal sites to other platforms. About 30 sites have been removed or moved so far. Of the 25 departmental sites still hosted on the University's central server, 15 are moving to WordPress or SharePoint.

- Some departments are choosing to build a WordPress site at sites.udel.edu or a commercially hosted service.
- Some departments are choosing to build a SharePoint site.
- Some units might choose to rebuild a site at a commercially hosted Drupal 7 or 8 service.
- Some departments are considering a move to Adobe Experience Manager, which will be hosting the UD home page later this month.
- Some departments may create an HTML archive of their current Drupal sites and host those pages on Copland.
- If a department's site depends on features in Drupal 6, the site could be moved to a commercial provider that continues to support Drupal 6. However, that is a short-term solution since only a few members of the Drupal community are continuing to release patches and other support for Drupal 6.

Email [consult@udel.edu](mailto:consult@udel.edu) for more information or to set up a meeting to discuss the best options for your Drupal 6 site.

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## Research Support

### Mills end of life

On January 27, the HPC team announced the plans for the final year of the Mills high performance computing (HPC) cluster. The Mills cluster was designed to have a 5-year life span; that span concludes at the end of the 2016 calendar year. A [statement](#) was released that provides an overview of the HPC team's strategy for moving forward. The [formal policy](#) document describes the strategy for the retirement of Mills. Questions about Mills and its final year can be directed to the HPC team using the [HPC help request form](#).

### HPC Symposium series

The IT Research Computing group hosted the February 2016 HPC Symposium to address the questions and concerns of UD's HPC community. Over 24 attendees participated in this open forum which included a discussion of the [Mills End of Life policy](#).

The first hour of the symposium included a formal presentation about the implementation of the spillover queue on Mills, "Mills: Job Scheduling Change." The presentation was followed by questions from the audience regarding how the spillover queue will affect their jobs and how they will need to change their job submissions. Additional questions were raised about the upcoming cluster, leading to a discussion about researcher needs and the design of the next cluster. The remaining time was spent in breakout groups led by HPC Team members discussing "Benchmarking jobs: Computational models for running Matlab on a shared cluster," "Getting started with Farber," and "Troubleshooting on Mills and Farber."

The next HPC Symposium will be held on June 8 featuring the Neunuebel Neuroscience Lab. ([Register](#))

#### **2016 UD GPU Hackathon**

Professor Sunita Chandrasekaran, Computer and Information Sciences, hosted a GPU Programming Hackathon at UD, May 2-6, to help developers with scalable applications to port to, or optimize, their applications on a GPU accelerator. National labs, universities, and vendors--including OpenACC, Cray, NVIDIA, Oak Ridge National Laboratory, and PGI--were present to mentor development groups. Members of the IT HPC team supported Chandrasekaran in coordinating the Hackathon and provided technical support to the teams during the event.

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## Teaching and Learning

#### **Summer Faculty Institute 2016**

Registration is open for the 2016 Summer Faculty Institute, May 31-June 2. In addition to the popular UD faculty showcase sessions, other workshops and presentations will relate to this year's themes: computational reasoning, information literacy, and maker thinking. Participants from UD will have their registration fee waived; educators from other institutions will be charged a \$75 registration fee. Visit the [Summer Faculty Institute website](#) to register and learn more about this event.

#### **2016 Transformation Grants**

Seventeen applications have been received for the 2016 Transformation Grants. Awards for the 2016 Transformation Grants will be announced in June. The applications came from faculty in all seven colleges who seek to improve teaching through innovative uses of technology. Several of 2015's recipients will showcase their successful use of the grant at the 2016 Summer Faculty Institute.

The grant program, in its fifth year, is co-sponsored by Information Technologies, the Center for Teaching & Assessment of Learning (CTAL), and the Institute for Transforming Undergraduate Education (ITUE).

#### **Classroom upgrades**

The IT University Media Services (IT-UMS) Classroom Technology group is currently reviewing bids for the upgrade and expansion of A/V systems in six classrooms primarily used by the Lerner College of Business and Economics. After the upgrades, these classrooms will be able to incorporate additional large LED screens to enhance teaching and learning. These upgrades are scheduled for completion this summer.

#### **UD Capture**

University faculty have increasingly relied on UD Capture, UD's lecture capture system, to enhance student learning since its 2009 implementation. This semester, there are nearly 350 courses being recorded, producing almost 650 recordings a week, resulting in over 8,600 recordings.

Due to the increased workload, UD Capture will be undergoing a major upgrade this summer. New capture hardware will be installed in most central classrooms, and in certain rooms the quality of recorded audio will be improved. The upgrades will enable larger image capture, a wider range of supported screen resolutions, and better playback experience for students. The goal is to have all centrally scheduled classrooms equipped for the start of the fall semester.

[Register a course](#) for UD Capture.

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## Business Systems

### **My Finances enhancement for prospective students**

IT Web Development (IT-WD) and Student Financial Services made enhancements to the My Finances view for applicants to UD. Prospective students now see a new tab, "Estimated family responsibility summary," which details an estimate of the total costs for the financial aid year—including books, supplies, transportation, and student loan options. This new view will enable families of prospective students to get a clear financial understanding of the investment required to attend UD.

### **New Functionality added to the Equipment Activity Web Form**

In partnership with Asset Management and General Accounting, IT-WD has added two options for Loans and Funding Changes to the Equipment Activity Web Form.

- The new Property Loan Agreement form documents loans of University equipment to an entity outside of UD. The form produces a paper copy of the agreement so that an agent of the borrower can assume the risk for the asset while in that entity's care.
- The new Funding Change form is used to transfer the funding of an asset from one accounting source to another. Up-to-date asset records are crucial for UD business processes, audits, and compliance.

### **Payment Activity application**

Procurement Services and IT-WD have released a new version of the Payment Activity application. Payment Activity allows UD employees to quickly find information for POs, requisitions, and contracts, and view reports for POs based on the purpose code or vendor. The application now uses responsive design, allowing it to be used effectively on most devices. It has also been re-written using a more secure architecture and has improved usability.

### **Database administration (DBA) updates**

- **Oracle database security – software patches**  
The DBA team has continued to apply the latest security software patches to the PeopleSoft and Web Forms Oracle databases. The production databases are set to be patched in mid-May 2016, after testing the impact in the development environment.
- **PeopleSoft and Oracle database software upgrade**
  - **PeopleSoft Tools upgrade**  
Financial Accounting PeopleSoft Tools software has been upgraded to the latest version, security patches have been applied, and the Oracle databases have been upgraded to Oracle 12c. In addition, both the tools software and the primary application software are in the process of being upgraded for the Human Resources PeopleSoft instance. In conjunction with the upgrade, the Oracle databases associated with HR are also being upgraded to Oracle 12c and relevant security patches are being applied. The upgrade to development instances of the HR systems will start in late May 2016, with a target of November 2016 for completion of the test and production environments.
  - **UD Time upgrades**  
The UD Time application software is currently being upgraded in the development environment to take advantage of several enhancements. The goal is to implement in production later this calendar year.
  - **Web Forms databases upgrades**  
The database software version for the development and production Web Forms databases have also been upgraded to Oracle 12c.



- **New database hardware changes**

Work continues on the project to move UD's PeopleSoft databases to the new Oracle Supercluster hardware and software. The first migration of a development instance of a PeopleSoft database has been successfully completed. Testing has led the DBA team to make several configuration changes and has yielded valuable information for future tasks.

Work also continues on the transition to a new backup and recovery strategy that uses a Zero Data Loss Recovery Appliance (ZDLRA). This project is being implemented in tandem with the Supercluster project. The work on these projects will continue throughout 2016.

#### Other Business Process Improvements

- The Web Application Firewall (WAF) in front of UD web servers was upgraded from WAF Layer 2 to WAF Layer 3.
- IT Management Information Services (IT-MIS) created a view of Development and Alumni Relations (DAR) related Journals. DAR had asked for timely and more comprehensive reporting of gifts and research dollars. IT has delivered a view for them to read any journals related to DAR.
- The spreadsheet journal import was put into production for the Controller's Office. Using PeopleSoft Financials, staff can upload a spreadsheet directly to a journal.
- To help the Controller's Office improve financial reporting of research grants at the end of a fiscal year, IT-MIS has invented a balance forward method that unravels some of the confusing situations that happen when updated end-of-year information becomes available. Specifically, the new process will assist the Controller's Office as they verify daily summaries throughout July.
- An improved method of loading new equipment into the "Asset" tables has been developed, saving several hours of manual entry.
- IT-MIS Implemented some code blocks, especially "19" accounting codes, so that they cannot be used to allocate credit card (Works) transactions. Some departments were allocating their Procurement Card transactions to account combinations that should not have been used. The new blocks will prevent improper use of those accounting codes with Procurement Card transactions.

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## Event Production and Media Services

IT-UMS produced nine major videos over the past several months including those promoting the Delaware in D.C. program, the UD Nanofabrication Facility, the UD Center for Biomedical and Brain Imaging, and the UD Resident Ensemble Players Theater productions.

IT-UMS also provided seven satellite uplinks including six live coast-to-coast segments on Fox Business News.

Together with the IT-UMS Performance Events Unit, the IT-UMS Video Production group supported 15 lacrosse matches for the stadium video board and live web streams. Performance Events also provided several days' worth of projection and sound support for the North American Duck Symposium in Annapolis, MD. Following that event, the unit supported 75 additional events in Mitchell Hall, Pearson Auditorium, the Roselle Center for the Arts, and multiple other locations on campus.

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## Personnel

**Anthony Ianozi**, joined IT-Client Support & Services (IR-CS&S) as an IT Support Consultant I in April. He will provide technology support to faculty and staff. AJ comes to IT-CS&S after providing technical computing support in the Office of Educational Technology at UD for the past 2 years.

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

- **Dean Nairn**, a Scientific Applications Analyst IV in IT-CS&S who retired on May 1st after 30 years of service
- **Hans Gaas**, Multimedia Project Manager, IT-UMS, who will retire at the end of June with 43 years of service.

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*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](mailto:it-commgroup@udel.edu).*