Spam suppressant

The campus has installed new measures to reduce the email problems caused by phishing. Most people won't notice a difference—except that they will see less spam. Here are the details:

Remember the disruption that phishing caused to UC Davis email in January? On March 3, the campus installed three new measures to help minimize any repeats.

Information and Educational Technology—after evaluating data, reviewing practices elsewhere, and consulting with campus IT advisory groups—will:

• Limit excessive amounts of email messages sent from Geckomail accounts (a practice known as "rate limiting"). Geckomail is the Web interface to the campus email system for faculty and staff.

• Remove some .gov email addresses from the allow list. Messages bearing these addresses will now be scanned for spam, the same as most email.

• Start filtering outgoing email messages for spam. Previously, the campus filtered only incoming messages. Any group concerned about a specific email message should contact the IT Express Campus Computing Services Help Desk at (530) 754-HELP (4357).

Details of all three changes, including a list of 70 government addresses that will stay exempt from spam filtering at this time, are available on this email update page (*technews. ucdavis.edu/resources/email_feb09.cfm*).

The new changes look for activities typical of spam. The Geckomail rate limit, for example, prevents attempts to send a single message from one account to more than 249 recipients, and conforms to the Mass Electronic Messaging policy (PPM 310-18). Volumes that high probably mean the account has been hijacked to send spam. This limit will not affect messages sent to lists, regardless of the number of subscribers.

The removal of some government addresses from the allow list means messages sporting those addresses will still come through, but will be inspected for spam. Only messages with excessive spam content will be filtered from incoming mail.

Messages from major funding agencies and government agencies working with the UC Davis community will not be affected. In addition to consulting Campus Council for Information Technology and Technology Infrastructure Forum representatives, IET worked with the Office of Research and Government and Community Relations to identify appropriate government sites.

Removing some .gov addresses from the allow list should help block common phishing scams that pretend to come from government agencies, such as the phony tax messages from "irs. gov" common this time of year.

Phishing happens when a scammer, pretending to be legitimate, emails you a message asking for your account log-in name and password. If you comply, the scammer uses your account to spew spam to other email accounts.

UC Davis endured several outbreaks of phishing in January, leading to gushers of spam that prompted some Internet service providers (Hotmail, AT&T, and others) to temporarily block email from all ucdavis.edu email accounts as suspect.

The frauds often sound plausible, but the red flag is the request for your account name and password. UC Davis will never ask you to confirm or verify your computing account by providing your password via telephone or email. If you receive an email that asks for that information, delete it.

IET is also developing a security awareness campaign for this fall, to educate all faculty, staff and students about key cyber-safety practices, and about the costs incurred when safe and secure computing practices are not followed.

READ MORE:

Learn about phishing at security.ucdavis.edu, or search the TechNews archives (technews. ucdavis.edu). Direct questions to IT Express at (530) 754-HELP (4357).

> **IET is developing a campaign to highlight key cyber-safety practices, and the costs incurred when they're not followed.**

Survey measures risks in campus server rooms

Server rooms support essential functions for the campus and, thus, these rooms are subject to the need for physical security safeguards. These safeguards include physical access, heating and cooling, fire detection, disaster recovery, water encroachment and power management. A proposal lined up for final approval this quarter will help to ensure that campus server rooms are uniformly reviewed for physical security needs.

The proposal creates a server-room survey of 80 questions that embody best practices on campus. Server-room managers would complete the survey for machines that provide a critical service, or use restricted data. They would disclose any serious risks they find, and report their plans for improvement as part of the yearly campuswide Cyber-safety survey.

The self-assessment survey looks at conditions in server rooms run by departments and units throughout campus, often in buildings that pre-date modern computing. Some of those locations are poorly secured, risk overheating, lack good backups, or fall short in other areas.

Those shortcomings expose the servers to damage, as well as to the theft of data or equipment. A fire in a poorly protected server room could damage the property of any unit that shares the building.

The campus Cyber-safety Steering Committee met in February and recommended a change to an exhibit of the campus Cyber-safety policy. The exhibit amendment integrates the server room physical security review into the campus

Telecom board helps steer campus improvements

The campus is spending nearly $100 million over six years to improve its telecommunications system. A committee led by computer science professor Matt Bishop will help that money do the most good.

Bishop, who helped steer earlier projects that improved wireless Internet access, chairs the 14-member Telecommunications Advisory Board. It represents the customers of the campus telecom network—which is nearly everyone at UC Davis—and advises the Information and Educational Technology department that runs the network on how the network should grow.

The work, critical to preparing the campus for the burgeoning data demands of the next decade, is continuing despite the difficult state budget. In fact, the committee and its feedback are especially relevant when budgets are tight, said Dave Klem, director of Communications Resources in IET (IET-CR).

"We know how to operate and staff the system," Klem said. The board offers guidance on strategy and priorities, and helps explain how faculty, staff and students use the system. "It is the right way to get alignment between IET-CR and the constituents," he said.

The six-year UCDNet3 plan will upgrade voice, data, video, wireless and cellular services managed by IET-Communications Resources. The new telecom equipment, already being installed in phases, will move data 10 times faster than the old one has. It offers more reliable electronics, better security, improved ability to prioritize network traffic, and increased wireless coverage and systems. It will support the fast transmission of huge data files needed to support advanced research, as well as high-definition video.

> **The 14-member committee and its feedback are especially relevant when budgets are tight.**

The committee will help decide where the improvements should occur first, among other goals. For 2009, Bishop also wants it to look at funding and how to upgrade telecom wiring in existing buildings.

The current financial model, for example, charges per NAM—the wired network access module, or plug, where a user connects to the telecom network. "But in wireless, one NAM handles lots of people. So the way you're paying for it doesn't correlate with the way it's being used," Bishop said.

"Another goal is to help IET-CR determine when to upgrade many of the existing wired networks to buildings, so they can be used more effectively, and so that the equipment matches needs," he said. "At least we can say, look, here are the problems, here are some ideas."

The telecom board is a working group of the Campus Council for Information Technology (CCFIT). Bishop is a member of CCFIT's Steering Committee. The telecom board's membership includes students, staff and faculty, from areas as varied as veterinary medicine, music and engineering, to psychiatry, the campus library, and the College of Letters and Science. Sometimes IET-CR has specific questions for the board, Bishop said, and sometimes it wants general guidance.

"A lot of the campus infrastructure involves its telecommunications. Some is out of date, and that needs to be handled," Bishop said. "To continue to provide good service to the university, you have to stay current with the latest advances."

READ MORE:

Visit ccfit.ucdavis.edu/telcom_ad_board.cfm.

Server rooms (from page 1)

Cyber-safety program. This recommendation has been forwarded to the Provost's office for review and adoption. After this policy exhibit amendment is adopted, the server room self-assessment survey will be included as part of the next Cyber-safety survey this fall.

Several groups have already vetted the idea, which emerged from an earlier proposal to mandate campuswide standards. That original option was set aside as too inflexible.

The self-assessment approach lets departments balance deficiencies in their server rooms against other cyber-safety priorities they need to address, said Chip Mrizek, director of information technology for the Graduate School of Management. He presented a draft of the survey proposal to the Strategic Approach to Investments in Computing Facilities committee in November, on behalf of the Deans' Technology Council.

Server-room managers will decide if each question applies to them—such as, does the room containing their server have a window? Is it near a street? "And if it does, is there a risk associated with noncompliance? Those risks have to be reported," Mrizek said.

"So there is basically enforcement," he said, "not that you have to fix this, but that

you have to assess and report plans for compliance."

"We wanted to balance the risk of the network rooms, of noncompliance to these standards, along with other areas of cyber-safety," Mrizek said. "Areas might have higher risks elsewhere."

The questions might seem to be "almost an exercise in minutiae," said Bob Ono, information technology security coordinator for the campus. But the scrutiny extracts telling details.

One question asks if a server room's windows are at least 40 inches from any door locks, to cut the chance that someone could disable the lock by reaching through the window. Another asks if the room has a temperature alert "and, if so, are the warnings logged to a recording device?" Servers throw off a lot of heat, and fail when they get too hot.

Units would report significant physical security risks to their dean, vice chancellor or vice provost as part of their annual Cyber-safety report, which asks people if they're meeting campus cyber-safety security standards.

In the past, server rooms have caught fire, had sprinklers positioned over racks of servers, or were backed up by power sources

that failed in less than a minute. Other rooms might simply need to attend to a few details.

"I don't have a sense of the condition of rooms across campus," Mrizek said, "but would be very surprised if more than a small percentage met all the standards identified in the survey."

CAMPUS TECH*Wrapup*

From SmartSite to Sakai QA

Pete Peterson, a longtime employee of Information and Educational Technology, is now the quality assurance director for the international Sakai Foundation. It oversees the open source software used in SmartSite, UC Davis' course-management system.

Peterson was SmartSite quality assurance manager until his Sakai appointment began Nov. 10, 2008. His new job is similar, but larger; he will oversee volunteers all over the world who test Sakai's software in their local installations.

"Pete's primary duty is to ensure that Sakai software exceeds industry norms for defects, reliability and scalability, as well as [to] coordinate the QA efforts of the Sakai community and staff," said Michael Korcuska, executive director of the foundation, in a post announcing the appointment Oct. 31.

Peterson said his top goals are to streamline the process that gets information to and from the community's QA testers, and to ensure the quality of Sakai software releases. His job relies on motivating, coordinating, and recruiting testers and volunteers from around the world. He will use blogs, emails, and other means of contact to bridge differences in locations and time zones.

"I'll have to be a very eclectic communicator," he said.

He will stay at UC Davis but work mostly for Sakai, which is headquartered in Ann Arbor, Mich. He will retain limited oversight of the SmartSite QA testers as part of his new job of overseeing testers worldwide. This will help him share the tactics and strategies he learns at Sakai with the quality assurance staff in IET.

What's new with DavisMail

The recent move of student email accounts from Geckomail to DavisMail continues to elicit interest.

Geckomail, powered by Cyrus, is the Web interface to the campus email service for staff and faculty. It also served students until fall 2008, when Information and Educational Technology moved almost all undergraduate and graduate student email accounts to DavisMail, powered by Google's Gmail. (Students at the UC Medical Center still use a separate service.) More than 34,000 student email accounts were moved.

DavisMail offers students a rich set of features and enormous data storage, plus access to popular communication tools in Google Apps for Education. The transfer went well, with about 1 percent of the students contacting the IT Express Computing Services Help Desk for help in the transition.

On Nov. 24, when IET updated the Campus Council for Information Technology on the DavisMail project, the council discussed options for including faculty and staff accounts in DavisMail. Privacy and security are common concerns, because the messages would be stored on servers run by Google, not by the campus. The move would give faculty and staff the same benefits and
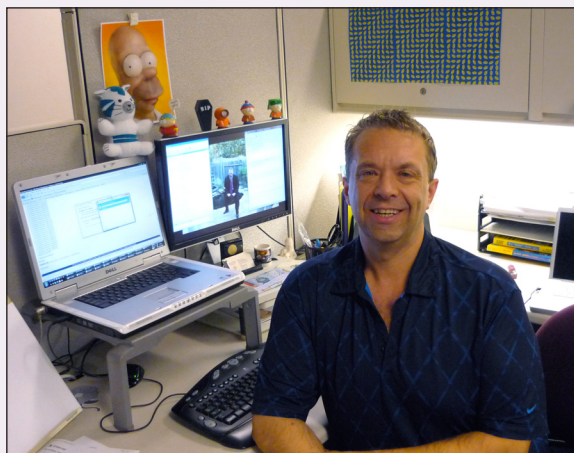
Photo of Pete Peterson by Phil Riley

Now working for Sakai: Pete Peterson has a desk at Information and Educational Technology's office in South Davis, but his QA assignment for the Sakai Foundation has him working with people all over the world.

features that students gained with DavisMail.

Any transition of staff and faculty accounts would have to meet several conditions. The UC Office of the President would have to negotiate an appropriate contract with Google; the office has begun discussions, but no contract has been developed to date. The contract for student accounts was negotiated last year.

If an agreement for faculty and staff to join DavisMail is reached, the campus would handle any migration of their accounts in much the same way it did with the students—with a pilot, survey, targeted communications, discussions with campus constituencies, and so on.

Interest in DavisMail extends to other UC campuses. On Jan. 21, IET held an online seminar to discuss lessons learned from the move to DavisMail. The department will present a modified version of the seminar in April through Educause (*www.educause.edu*), which promotes the smart use of IT to advance higher education.

Davis conference takes shape

The list of topics is starting to gel for UCCSC2009–Focus on Security, the combined UC Davis IT Security Symposium and University of California Computing Services Conference scheduled June 16-17 on campus.

The midweek conference will feature lectures, hands-on labs, and presentations by university and industry experts. Based on plans so far, the subjects will probably include green computing, cyberinfrastructure and reduction of security risks.

The conference has also begun to line up sponsors. They include Juniper Networks, which is donating $4,000, plus $500 to help offset travel costs for participants who come from other University of California campuses. Registration will cost less than $125 per person.

The theme is "Focus on Security." The conference brings together IT workers from throughout the UC System so they can learn new information, exchange ideas and solutions regarding common problems, and spur each other toward excellence. The conference will hear a report from the Office of the President, announcements of this year's winners of the UC Larry Sautter Award for Innovation in Information Technology, and provide an opportunity for networking.

The biennial IT Security Symposium and annual UCCSC are usually separate, but 2009 is Davis' turn to host the UCCSC. Since both events occur in the summer, the campus combined them. Read more at *uccsc2009.ucdavis.edu*, or email questions to uccsc2009@ucdavis.edu.

Eighty updates, one report

The latest IET Report, full of news and information about UC Davis technology projects, is now available online.

The summary, prepared by Information and Educational Technology three times a year, presents entries from that department and the Office of Administration, UC Davis Health System, and the Office of Resource Management and Planning.

This report has 25 pages with more than 80 items from October 2008 through January 2009. Entries include updates on the Identity Management project with the UC Davis Heath System, the IT Administrative Services Roadmap, and the project to provide easier, more consistent access to information in the Campus Data Warehouse.

Find links to the report in the "News & Pubs" box in the lower left corner of the main IET Web page at *iet.ucdavis.edu*.

TECH*Wrapup* *(from page 3)*

Telecom department to move

Communications Resources, the telecommunications department of Information and Educational Technology, will move to a new home by the end of this fall. The site is west of Highway 113, across from the University Airport and just north of the Hopkins Road Services Complex.

IET-Communications Resources (CR) now works out of temporary modular office buildings on the south part of the core campus next to the Tercero dormitories. The modular buildings will be moved to the new site; their current location will become green space, part of plans to expand the Tercero student housing area.

The two-stage move is estimated to begin in late summer, said Diane Bahr, who manages the Engineering and Construction Management unit for CR. In part one, a new set of modular offices will be built at the west campus site, and employees will move in. In part two, the current structures will be dismantled and moved. CR will occupy about 10,000 square feet in the new structures and about 1,500 square feet of the relocated structures. The rest will be occupied by other UC Davis staff.

It's unknown if the state budget deficit could affect any part of the project, but so far it has not.

Bahr said CR is planning the move with various departments. The unit is working on the design with the Office of Resource Management and Planning, Facilities Operations and Maintenance (O&M), and an architect engaged by O&M. Transportation and Parking Services will construct a parking lot near the new location.

Software helps deter ID theft

The campus has added Identity Finder to the lineup of tools it uses to protect personal data from theft and other misuse.

Technical staff can use the Identity Finder software to scan computers—and soon, selected databases—for sensitive personal information such as Social Security and driver's ID numbers.

UC Davis Cyber-Safety policy calls for such information to be deleted, stored off line, or encrypted if it must be kept on a computer—but first the computer user has to know the data is there. Identity Finder can find the data even when it is stored in dormant class files, forgotten reports, or similar digital attics.

Information and Educational Technology bought Identity Finder licenses last fall for use by tech support coordinators, members of the Technology Infrastructure Forum, and IET employees who need the tool. (The UC Davis Health System has a separate license for Identity Finder, and UCDHS staff should contact Health Information Management, *www.ucdmc.ucdavis.edu/himetp*, for further information.) Learn how to request a license at *my.ucdavis.edu/software*.

Kuali workflow tool can save time, money, effort

Imagine if every new restaurant had to make its own pots and utensils before it could open. The chore would distract from the bigger goal of getting the food right, and besides, how tedious to re-create the same basic cookware over and over.

Tech has similar head-scratching inefficiencies. This year Information and Educational Technology will help UC Davis solve one of them by adopting a workflow tool called Kuali Enterprise Workflow (part of a set of tools known as Kuali Rice) that could be used in any number of campus services and programs.

If use of the tool spreads, developers won't have to re-invent workflow tools each time they create or update a program at UC Davis. The campus will gain by not having to pay for the needless re-invention.

Workflow tools take a business process, such as paying a bill, and route it electronically through a series of people for review and approval, said Curtis Bray, technical architect for middleware in IET. It's a routine but vital piece of infrastructure, and invisible to users when it works.

The first application scheduled to use Kuali Enterprise Workflow will be MyInfo-Vault, which creates digital dossiers to support faculty promotions, this summer.

Kuali Rice—named after a Malaysian cooking wok—is overseen by the Kuali Foundation, an Indiana-based nonprofit that dates to 2004. It helps develop community-source administrative software for higher education. Its members comprise about 20 universities and colleges, including UC Davis and four other University of California campuses, plus several commercial affiliates, including IBM and Sun Microsystems. The structure resembles the Sakai Foundation, whose Sakai software powers the SmartSite course-management system at UC Davis.

Kuali Enterprise Workflow is new to UC Davis, but Indiana University created it eight years ago and has used it ever since. "They have enhanced it to handle typical academic needs," Bray said.

IET chose Kuali Enterprise Workflow because UC Davis has begun two other projects that will use Kuali administrative systems: Kuali Financial System, for campus financial transactions, and Kuali Coeus, which supports research. Both systems require the use of Kuali Rice, including Kuali Enterprise Workflow.

IET chose MyInfoVault for the first Kuali Enterprise Workflow deployment because MyInfoVault needs a workflow process as part of the academic review process, and the release of Kuali Rice converged nicely with that need. The installation will help show other parts of campus how Kuali Enterprise Workflow can be used to support their programs—and help lay the foundation of the Kuali Rice infrastructure so that others on campus can use Kuali Rice in the future.

Wider campus use of Kuali Enterprise Workflow and other elements of Kuali Rice is part of a long-term business goal. Broad use would mean people spend less time learning new computer processes, because they will already know the workflow piece; consistency for campus developers when they write or update programs; and central campus support for the tool.

Plus, wide use would save money.

"A central service will ultimately reduce the cost of overall maintenance, because one central system will be maintained, instead of multiple systems," says a document prepared by IET for the UC Davis Kuali Rice Policy 200-45 Conceptual Review. Training costs will drop, "because workflow, notification and data exchange will be performed in a standard method, instead of multiple methods."

Campus IT Architect David Walker is working on documents to display the value of Kuali Rice to various campus departments. Longer term, IET would like to help build a community of Kuali Rice users on campus.

MyInfoVault, a complex process, will use the workflow and identity management components in Kuali Rice. Departments that want to convert simple paper forms to Web-based processes might be drawn to a subset of Kuali Enterprise Workflow known as eDocLite.

"It's a simpler form, for simpler needs," Bray said. "We think that's the first thing other departments will be interested in."

READ MORE:

Read the 200-45 document, and more, at admincomputing.ucdavis.edu. Find "latest submissions" and click on the Kuali Rice link.

Campus makes gains in cyberinfrastructure

A fully supported cyberinfrastructure (CI) is critical to maintaining competitive research programs at UC Davis as a research-intensive ("Research 1") university. The campus is placing an emphasis on supporting high-performance computing as the priority component of CI to be addressed in the near term. Several CI-related projects are moving forward, especially in areas that support high-performance computing for computationally-intensive research.

Recent advances include:

• The creation of a subcommittee to the Campus Council for Information Technology (CCFIT) on research computing, which will move ahead with ideas developed following the Chancellor's Fall 2007 Conference on information technology. Mark Asta, a professor in Chemical Engineering and Materials Science, agreed in January to chair the group. While budgets are tight, setting priorities and planning for the future are most important!

• Progress on identifying a UC Davis research project that would tap into the UC Grid, to help illustrate the grid's value to researchers here. The grid is a network of high-powered computing resources at four other UC campuses; any UC researcher can use it to share the resources. While no specific project has been named yet, Information and Educational Technology will work with campus researchers to use the grid specifically for their projects.

• The creation and maintenance of an inventory of campus server rooms that are available, and appropriate, for installing the racks of computer servers that campus researchers need for their computationally-intensive work. New spaces will be added over time.

"Cyberinfrastructure encompasses all of the traditional IT services, such as computing, networking, storage and security, but places an emphasis on resource sharing, remote access, and the capacity to support high-performance applications," said Mark Redican, Network Operations Center manager. Demand for CI continues to grow as faculty, researchers, staff, and students increase the complexity and ambition of their work, in projects that range from advanced analysis of vast datasets to high-definition online broadcasts of concerts.

One key aspect for the researcher is that CI facilitates collaboration among individuals who may be scattered around the globe. While great strides are being realized in improving CI for research, the director of the National Science Foundation Office of Cyberinfrastructure (OCI) indicates that "data management" is still the largest challenge (and largely unmet) on campuses. While this is the emphasis of the CCFIT subcommittee, efforts are under way to explore how sharing resources could benefit large-scale data management.

For more on cyberinfrastructure, check out the OCI's reports and announcements at *www.nsf.gov/dir/index.jsp?org=OCI.*

Following up on the Chancellor's conference

IET established a working group a year ago to help UC Davis develop its computing and networking services, specifically for researchers. The group, chaired by Morna Mellor, director of Data Center and Client Services in IET, strives to help UC Davis develop its computing and networking services, specifically for researchers.

In addition, the CCFIT research computing subcommittee will help the campus determine what it will take to fully support research computing. Likely topics for their consideration include finding space for researchers who have equipment and just need a good place to house it, as well as helping faculty and researchers who want access to advanced computing power but don't have their own facility.

> **The general idea is to efficiently develop UC Davis computing initiatives to support the work of a growing campus.**

The subcommittee will also follow up on a report released last year that identified information technology issues requiring the campus's attention. The report came from a committee led by Bernd Hamann, associate vice chancellor for research and a professor in computer science, that developed a five-year vision and specific goals based on the 2007 chancellor's conference. (Read more in "Conference follow-up report sets bold goals for UC Davis IT," available in the TechNews archives at *technews.ucdavis.edu.*)

Meanwhile, a separate group—the Server Room Space Evaluation Committee (*saicf.ucdavis.edu/srsec.html*), named last April—is developing the server room resource inventory. It lists available campus locations with supported space for server racks, and currently identifies two: the Campus Data Center, aimed more at administrative computing, and a new server room in the Watershed Sciences building, aimed more at research computing. New server room space in Academic Surge and Hoagland Annex could be added to the list, as the location in Watershed fills.

All requests for server space made through the committee—23, as of mid-December—have been addressed so far. (For information, contact committee chair Dave Zavatson, of IET-Data Center and Client Services, at dhzavatson@ucdavis.edu). IET will help prepare and oversee the rooms regarding occupancy tracking, access, records, surveillance, and fees. The campus will provide investments in improvements to departmental server rooms, and departments that provide space will realize better networking, electricity, cooling, fire suppression and security because of this partnership.

Part of a larger strategy

The server room group is a subcommittee of the Strategic Approach to Investments in Computing Facilities (SAICF) Committee, which is developing a strategy involving both the Davis and Sacramento campuses to guide investments in computing facilities. Pete Siegel, UC Davis chief information officer, and John Meyer, vice chancellor for Resource Management and Planning, co-chair the committee, which was formed by then-Interim Provost Barbara Horwitz in late 2007.

The general idea in all these ventures is to efficiently partner with other administrative units and researchers to develop campus computing initiatives to support the work of a growing campus, including administrative, academic, and research. Considering the budget issues facing the campus, it is more important than ever to explore alternatives to collation space and support models that will enable safer and a more sustainable infrastructure for campus computing.

Long-term plans include a new Campus Data Center. The current one is due to be removed in the future for a new engineering building.

The effort to share resources extends into regional and national grid resources, available through such networks as TerraGrid and Open Science Grid. There is also an effort to share resources by establishing "regional" or "shared" data centers in northern and southern California to support and expand the availability of computing resources for all campuses. The idea of shared clusters, use of cloud computing, and other services are being discussed among the UC campuses, and several pilots and initiatives are under consideration.

In addition to all the above UC-wide efforts, there are individual campus initiatives to seek ways of improving energy efficiency within the data centers, server rooms, and in departments, to lower the impact on campus utility budgets.

Read more about the Strategic Approach to Investing in Computing Facilities, including information about the server room projects, at vpiet.ucdavis.edu/saicf.cfm.