

Winter 2011

Technology Report

Updates for the campus community about UNLV's central technology unit, the Office of Information Technology



A Cool Plan to Chill File Servers

Cam Johnson leads the data center project, which benefits customers like Rolando Mosqueda (left) and Kivanc Oner (right) who use OIT's data hosting services to provide purchasing and document imaging software for UNLV.

Servers are needy. These high-powered computers need cool air, security, and Internet connectivity to process the thousands of requests they get per second. To meet server demands, it's best to keep them in one spot, a data center. But then the servers get hot. If they get too hot, they break. Enter a new, energy efficient cooling system to be used for the first time on campus in the Thomas Beam Engineering (TBE) building. The new system promises to keep UNLV servers cool in the most efficient way possible.

To appreciate the beauty of the new data center's design, visualize the current situation. OIT houses servers in eight locations on campus, two of which are top notch data centers. With multiple paths to the Internet, extra power supplies, rigid security, and back up generators, they offer the

greatest possibility for 24-7 uptime. These premier spaces house UNLV's most frequently used services, like WebCampus. OIT puts all other servers wherever space is found, often closets and, sometimes, well, bathrooms.

"I look forward to the day when we manage our low-use servers in one space instead of six," says Cam Johnson, operations center manager and leader of the TBE data center project. "It'll be much more efficient."

"When the new TBE data center comes online this summer," says Cam, "We can shut down at least three, if not all six, of our makeshift data centers. Also, we can remove low-use servers from our top-notch spaces to make more room for services like Munis, UNLV's purchasing software. Plus, we'll save up

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Apple Offers Seminars About iPad, iPod Use in Education

Are you interested in seeing how other universities use Apple iPads, iPhones, and iPods? Apple offers discipline-specific seminars about mobile technology. Dr. Dale-Elizabeth Pehrsson, professor and associate dean in the college of education, said the seminar, "provides a good overview of the general state of IT affairs."

Apple provides a class set of mobile technologies for participants to test during the seminar. The customized presentations promise to be engaging. Pehrsson says, "When I do not have the urge to check my e-mail during a presentation I know it is good." If your department is interested in a customized seminar, contact UNLV's Apple Representative, Jeff Wolf at 480-563-7501 or jeff.wolf@apple.com.

A Healthy List of Accomplishments in 2010

From a new student e-mail system to Web templates for faculty, UNLV technology improved, despite budget cuts. See center for upgrades completed in one year.

See center

2010 A YEAR IN REVIEW



New Computers

Six computer labs got new computers or replacements for old ones.

Secure Wi-Fi Offered

UNLV-Secure, encrypted wireless service launched to campus. By early fall, more than 23% of the wireless community adopted it.



MyUNLV

Students pay course fees for the first time in MyUNLV.

Lotus Notes Help

New Lotus Notes website provides "How To's" for many business activities.

Wi-Fi iNtegrated

Adapted the wireless login service so that it now references student and staff info which resides in MyUNLV.

Faculty Websites

Ready-Made Websites launched to make it easy for faculty to create an online presence.

Create yours today:
oit.unlv.edu/website-publishing

Gmail Integration

Launched new Rebelmail system, powered by Google. In the first three days of our campaign, 48% of students transitioned to the service.

Credit Card Compliance

Secured the credit card kiosks at parking services and cashing to meet PCI compliance requirements.

"Almost TECs" Built

Ten classrooms outfitted with essential teaching technology.



Network Redundancy

Redesigned the data center network to improve redundancy. Also began providing firewall services.

Mail List Server

Mail List Manager service brought online to replace Listproc, a listserv service formerly offered by System Computing Services.

Lotus Notes Archiving

E-mail archiving for Lotus Notes begins, making it easier for General Counsel to process litigation requests in accordance with the Freedom of Information Act.

Network Rate Stabilizes Funding for Internet Access

When you log in to MyUNLV, read Lotus Notes e-mail, or update WebCampus, you're using the network. Your transactions travel through advanced computers, switches and routers, which need upkeep. UNLV's presidential cabinet recently approved a network rate structure to provide stable funding to cover those costs, which include staffing, operational and equipment maintenance expenses.

Beginning with the next fiscal year, each cabinet administrator will be billed for the network charges for units under his or her leadership. What are those bills based on? OIT researched how network services are funded at other higher

education institutions and found that the chargeback system, based on the utility model, is considered a best practice.

"It's a port-based cost model," says Georgia Stergios, business manager for the office of information technology. "We count the number of active ports in the building and distribute costs according to assigned square footage. It's a little different for those units who purchase and manage their own network infrastructure."

When asked if this new network rate would get us, say, more widespread Wi-Fi on campus, Georgia clarified, "The network rate covers maintenance costs for existing equipment, not expansion. In

fact, the rate doesn't yet cover the cost of replacing equipment when it dies," says Georgia. "But in the coming years, once we have determined how to incorporate those costs, it will."

The average employee doesn't really need to know much about the network, or about this new rate structure, except that both systems provide the Internet access you rely upon day-to-day.

For more details about the rate development, visit the network rate web page at oit.unlv.edu/network-and-security/network-rate-structure. The page will be updated with frequently asked questions as we continue to work with cabinet members and their staff.



Secure Transfer

Launched Secure File Transfer, an online file sharing application to be used as an alternative to sending large files through Lotus Notes.

Network Rate Structure

Cabinet approves a new network rate structure, which provides stable funding mechanism to cover network infrastructure and support costs.



RAVE: It's like UNLV Today, but for students

Get your news to students through RAVE, an online application that sends weekly e-newsletters to students. Go to oit.unlv.edu/rave, log in with your Lotus Notes account, and then click "submit" to input your content into the form.



To Attach or to Link?

When to Use the "Secure File Transfer" To Send Documents

In October, OIT advertised a new service called "Secure File Transfer." It's a website where you can upload large files (up to 2GB) and provide a link to others so they can go download the file. But it didn't make much sense to Kristene Fisher who frequently sends large files to people on and off campus. She asked, "When should I use this Secure File Transfer thing? And why?"

DeAnna Schoendienst, manager of Client Services explains, "Before we offered Secure File Transfer, if you tried to send a really big file to someone with a Cox account, your message may have been rejected because Cox sometimes limits incoming mail to 20MB." DeAnna also explained, "Incoming mail to UNLV Lotus Notes users would slow mail delivery for everyone because attachments were so huge." OIT put a limit on incoming files sent from external accounts and offers Secure File Transfer as an alternative.

The primary purpose of the Secure File Transfer tool is to get large files to and from external e-mail accounts. The Lotus Notes community can also use it to share files with each other, keeping large files out of their inbox.

How's it work? You log into the website, upload your large file, input the e-mail addresses of intended recipients, write a message, and click send. The recipients will get an e-mail from you with a link to the file. The link works for seven days.

Do I have to use Secure File Transfer? No. It's optional. However, people who try to send you file attachments over 100 MB from a non-UNLV account will be prompted to use Secure File Transfer to get you the file. Lotus Notes restricts incoming attachments from off-campus

to 100 MB. It does not restrict outgoing mail, nor mail to fellow Lotus Notes users.

When should I use It? Use it to send large files to people off campus, who do not use Lotus Notes. For example, it may be the best way to get a file to a Cox e-mail user because Cox rejects e-mails greater than 20 MB in size. When you can, it's a good idea to avoid sending large files through e-mail, even to other Lotus Notes users.

Is this tool integrated with Lotus Notes? Not really. It's a separate system. It only uses your Lotus Notes Web login for access. Your address book is not connected to it, and you will not see a copy of the messages in your "sent mail" folder. However, you can send a copy of messages to your Lotus Notes account.

What if the person I send to is out of the office for more than seven days? The tool stores files for seven days. If the recipient doesn't download in that time, you will have to resend.

You can also use this tool to ensure that only the intended recipients can download your file by selecting the "authentication" option, which prohibits unintended recipients from downloading the file you sent.



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to 20% of the energy costs.” How?

Cam says it’s all about the Hot Aisle Containment System, HACS. As a stand alone unit, HACS cool servers more efficiently than their predecessors, Computer Room Air Conditioners, CRACs.

Whereas CRACs used large air-conditioning units to continuously pump cool air up through ventilated flooring, HACS pipe cool air directly into the front of servers and capture hot air as it passes out the back. The hot air travels through

water-filled pipes to modular chillers located on the roof of TBE. A plexiglass roof on the HACS prevents hot and cool air from mixing, which increases the number of servers OIT can host for campus.

Failures in cooling equipment have less impact, too. Cam explains, “If one in-row unit goes down, you lose the capacity to cool, but in very small chunks.” Plus, it’s easier to swap out one small fan in a modular unit than to make a service call to an HVAC company to replace a large air

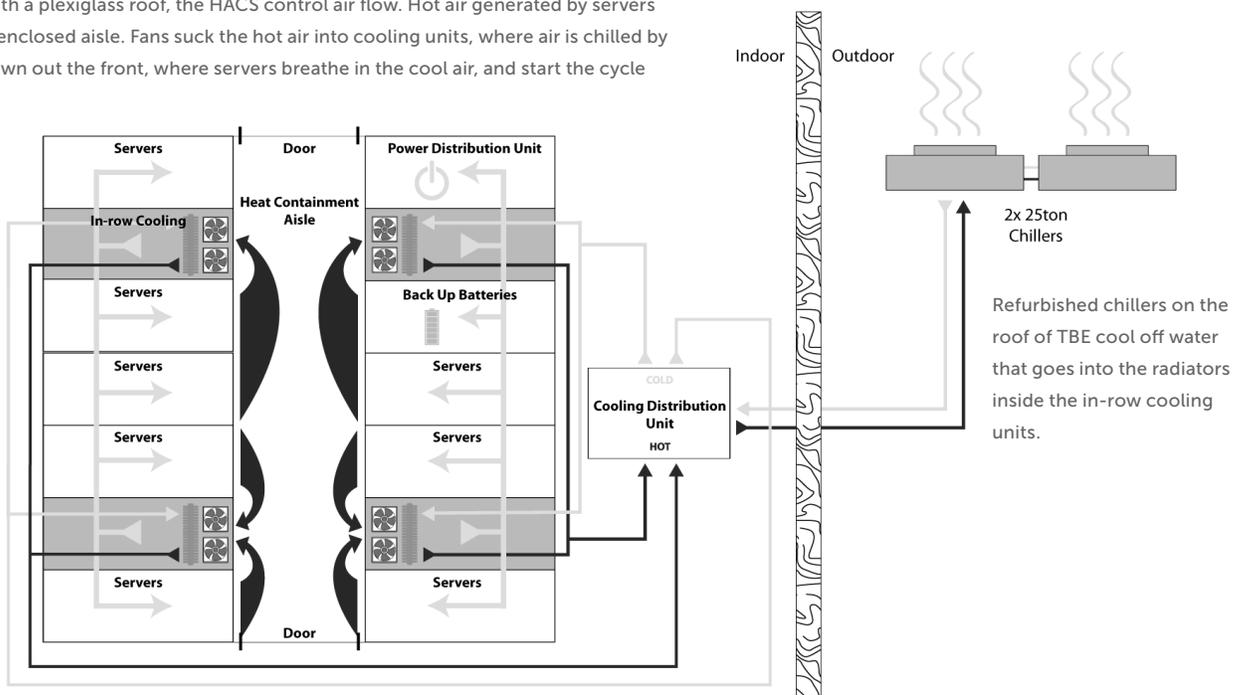
conditioning unit.

Despite the modern cooling system, TBE is a “low-end” data center because, for now, it lacks a back up generator and some high-end network redundancy. TBE A305 offers 1,600 square feet of space and, when finished, will have a new fire prevention system.

Recycled and refurbished equipment reduced project costs, which are shared between OIT and Provost offices. Please contact Cam at 895-0760 for more information.

Hot Aisle Containment System

A diagram of the new Hot Aisle Containment System (HACS) to be installed in TBE A305. As a stand alone unit with a plexiglass roof, the HACS control air flow. Hot air generated by servers is directed into an enclosed aisle. Fans suck the hot air into cooling units, where air is chilled by a radiator, then blown out the front, where servers breathe in the cool air, and start the cycle again.



System Maintenance Schedule & Incidents Now Posted Online

Nothing like a “Server Not Found” message at 1 a.m. when you’re finishing a grade import to WebCampus, eh? OIT aims to keep systems up 100% of the time, but sometimes techs have to do a little patching or updating to make sure computers runs smoothly. Despite best efforts, sometimes the hardware or software fails unexpectedly. The best thing we can do in those situations is let you know, which is why OIT just published its system maintenance

schedule online. You can check out the days and times when technicians regularly work on major campus systems. We also post unexpected outages on our “Incidents” website. Our operations team stays up late and gathers details from weary system administrators, just to get the news to you. They tweet, too. We want you to be in the know.

Check out our website at oit.unlv.edu or follow us on Twitter @[unlv_oit](https://twitter.com/unlv_oit).

Chat through Lotus Notes

Like Yahoo, Lotus Notes e-mail comes with a chat feature. Called Sametime, the chat service is tied to the UNLV address book, and allows you to instantly connect with coworkers, which makes a lunch reminder, “Meet me at 12:30 in the SU,” much easier than an e-mail. Visit lotusnotes.oit.unlv.edu for tips.