

Essentials

NEWS

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CSS Mission: To provide a secure, reliable, and innovative computer environment that facilitates, supports and enhances the mission of the College of Engineering.

Hours

Elder and Hering computer labs are open 24 hours/day, 7 days/week except for cleaning. With an access card, you can enter the building and the labs after the Seamans Center closes.

Consulting, 1253 SC,
M-Th 8am-9pm; F 8am-5pm; Sun 2-9pm

CSS Main Office,
1256 SC, M-F 8am-noon;
1-5pm

Vista and What It Means

Editor's Note: There are big changes afoot in the College of Engineering computing environment. A new operating system, Vista, is on the way. See also the College IT Infrastructure Changes beginning on pg. 5.

What and Why Vista

Vista is the newest version of Microsoft's Windows operating system. It is replacing Windows XP, the product currently on most Windows computers in the college. Because Microsoft quit selling XP in June 2008 and is phasing out support for XP, we are moving to Vista. In addition, ITS has put Vista on Windows computers in the ITCs and the general assignment classrooms.

When

CSS is already working with Vista to create a computing environment that is more secure and robust than our current XP environment. We expect to have our configuration and testing completed so that CSS-administered Windows computers can be switched to Vista at the end of the spring 2009 semester.

Who

CSS is currently experimenting with Vista to create an improved environment. Faculty and staff will soon have access to Vista computers to test software for courses and administrative needs. CSS will depend on people who need and use software packages to verify that those programs work as needed under Vista. Because CSS will switch the Elder and Hering lab computers to Vista at the end of the spring session, please test software that you need for a summer course as soon as Vista machines are available for testing.

More Access, More Secure

A new possibility with the Vista environment will be an organizational unit (OU) for locally administered computers that will give those computers automatic OS and software updates for a one-time fee. More information about that will be coming next semester.

The new environment, of which Vista is a part, will be more secure than the current XP environment, with network and local firewalls.

Software Change

Software installed for courses will be handled differently in the new environment. The [funding model](#) has not changed, but each package will now have a faculty owner per department that uses the software. The software owner(s) will be responsible for telling CSS when to upgrade to new versions and when there is no longer class use of the package.

Part of a Larger Plan

Vista is part of a new environment that CSS is creating. Some pieces of that new environment are currently visible and usable. Previous Version gives users access to previous versions of documents. This summer when CSS installed the NetApp file storage system, Previous Version became available; see the [August 08](#) issue of *Essentials* for more information.

Another part of the new environment is correct reporting on shared quota space. Quotas for shares now correctly show the space used by the share, rather than the total disk volume. If your view of My Computer is set to Details (My Computer | View | Details), you see the total size of any shares, as well as free space. For a pie chart of used and available space, from My Computer right click on a share volume and select Properties.

How shares are managed will change with the new environment. In the past CSS created share accounts for instructors to use for class web sites. Now that ICON is available, that resource will be the main repository for class files.

What about XP?

XP will continue to be the main Windows operating system until Vista is deployed. Because CSS efforts are now focused on creating the Vista environment, no new XP software will be added to the lab load.

More to Come

Throughout the spring 2009 semester CSS will be saying more about the new environment. You'll find that information in other issues of *Essentials*.

Anti-Virus Software

For Locally Administered Windows Computers

If you administer your Windows computer on campus or at home, you should get the anti-virus software, Symantec Endpoint Protection (SEP), from the ITS [software download](#) site: After you login with your Hawk ID and password, click the AntiVirus Software link. You will see that you have several options for versions of SEP. If you are running a firewall, download the Full CD (zip) version, noted by blue arrow shown.

Symantec Endpoint Protection for Windows Vista/XP/2000

Symantec Endpoint Protection is the most recent product from Symantec for virus previous versions of Symantec AntiVirus to Symantec Endpoint Protection.

Student Customized Versions

Student Customized Installer Student Customized Installer (64-Bit)

Faculty/Staff Customized Versions

For on-campus work computers (managed):

Faculty/Staff On-Campus Installer Faculty/Staff On-Campus Installer (64-Bit)

For at home, personal use (unmanaged):

Faculty/Staff Off-Campus Installer Faculty/Staff Off-Campus Installer (64-Bit)

Other Installers (Uncustomized)

Full CD (zip) ←



Essentials is a publication of [Computer Systems Support \(CSS\)](#) in the College of Engineering at the University of Iowa. *Essentials* is published during the year whenever there is sufficient news to report to the user community.

Back issues of *Essentials* are [on-line](#).

Password Checking Tool

Use the [Engineering Account Password Checking Tool](#) to verify that you know your Engineering account password. If you enter your password correctly but your account is locked or the password has expired, that information is returned.

CSS

[College of Engineering](#)

[University of Iowa](#)

ANSYS Training for Faculty

Offered to Faculty

DRD Technology is offering no-cost, ANSYS Workbench training to full-time faculty at universities including the UIowa. The training will be held in between the fall 2008 and spring 2009 semesters.

DRD will compress our Introduction to ANSYS/Workbench, DesignModeler, and Introduction to ANSYS CFX into a 2-day format. DRD engineers will be available to discuss areas of special interest. Our tentative agenda for the 2-day courses is as follows:

Day 1 - Introduction to ANSYS/Workbench Simulation
Day 2 Morning Session - Design Modeler
Day 2 Afternoon Session - Introduction to ANSYS CFX

Customers who use ANSYS FLUENT for CFD will find the Introduction to ANSYS CFX training valuable because FLUENT will be integrated into Workbench starting with the next ANSYS version, which will be version 12.

Detailed descriptions of the courses including the hands-on workshops are available on the DRD web site: [intro](#) and [DesignModeler course](#), and [CFX Workbench course](#).

DRD will conduct this training at their Tulsa, OK, offices twice on December 17-18, 2008, and January 7-8, 2009. Class size is limited to 8 students, and each university may send only two attendees. Please contact Lenora Davis to register for this training at (918)743-3013 ext 101 or send [email](#).



Retrospect Backup: Returned

Local Hard Drive Backup

This summer when CSS began moving to a different storage environment (a project that is not yet complete, but is the reason that you can get Previous Versions of files in your home directory, see *Essentials*, [August 2008](#)), we discontinued using Retrospect to back up local hard drives. For a variety of reasons, in October we reinstated Retrospect for hard drive back up. Your computer files should be being backed up now. There are two ways to know that those back ups are occurring: you no longer get a message from the Retrospect client telling you that there has been no backup since [date]; or go to **All Programs | Utilities | Retrospect Client** and check the Status tab.

If your computer is not being backed up, please call the CSS consultant, 335-5055 or send email to consultant@engineering.uiowa.edu.

For information on Retrospect, read the article in the [August 06 issue](#) of *Essentials*.

Training at ITS

January NExTT Workshops

NExTT (New Experiences with Teaching Technology) courses 12-15 January 2009 include many classes on ICON, Introduction to Web 2.0 Tools, and using personal response systems (clickers). Read general [NExTT information](#) and [course descriptions and register](#).

ICON courses include sessions on distributing course materials, communications tools, using the gradebook, quizzes, and customizing your course homepage. Courses are 1-2 hours long, and all are hands-on. You sit at a computer to work on the material being presented. ITS provides the computers and sample files, though you can also bring your own. In addition to a teacher, there is another person in the session to answer questions and keep participants moving at roughly the same pace.

If you miss the NExTT workshops, there are other options: ITS will offer ICON classes in February and March 2009. See the [ITS training page](#).

**All ITS training is listed at
www.its.uiowa.edu/training**

Identity Finder: Use It Now

SSN Removal

As noted in the May 08 issue of Essentials, social security number remediation must be accomplished by College of Engineering faculty and staff. Identity Finder (IF) is the program that the University purchased to find and remove or secure files with SSNs. Identity Finder can be downloaded from the ITS download site and has been installed on CSS-administered Windows computers.

CSS created several web pages to describe the [scope](#) of the SSN removal project and [how to use IF](#), as well as a [check-off form](#) to submit when all computers and storage areas have been scanned and SSNs removed.

[Chapter 36](#) of the Operations Manual has information on the University policy regarding appropriate use of social security numbers. In summary, most of us will need to remove existing SSNs from documents, both electronic and paper, or secure those files.

If you have questions about the project, please talk to Diana, 335-5121, 1256 SC. If you need help with the Identity Finder software, please see the consultant, 335-5055, 1253 SC.

/Diana Harris

Software Changes

Because the CSS sysadmins are spending most of their time creating, testing, and recreating the new environment that includes Vista, no new software is being added to the Windows XP environment. See *Vista and What it Means* on page 1 for information about testing software under Vista.

Linux

The Linux version of Pro/ENGINEER Wildfire 3 will be removed at the end of the spring 2009 semester. The company that sells and supports Pro/E has discontinued Linux support.

Workshop Requests

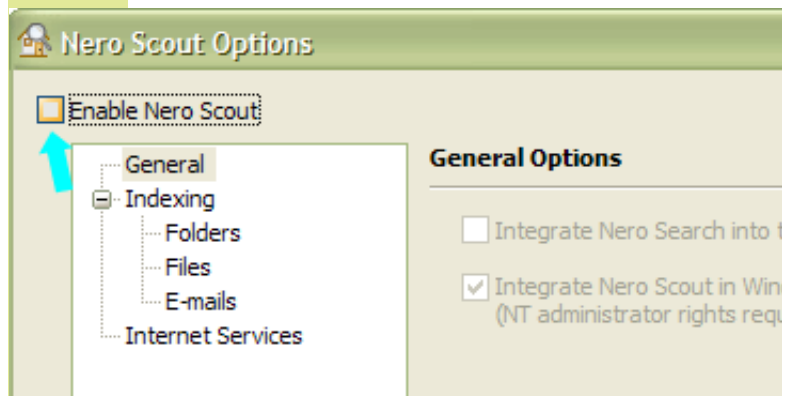
In November CSS held a workshop on computing safely at home using a router/switch and Symantec Enterprise Protection. That course was requested by people in the college who took a survey distributed by the CITL (Campus IT Leaders). More than 20 people attended our November session.

Do you have suggestions for other computing topics you would like us to cover? Send suggestions to webmaster@css.engineering.uiowa.edu.

Removing Nero Scout

Many Windows installations that CSS has done included Nero Scout, which is a part of Nero 7 that collects information about media files and makes that information quickly available to the various Nero functions. Nero Scout runs at startup and runs constantly in the background, scanning for new media files. You know that Nero Scout is running because when you open My Computer, at the bottom of the drive list is **Other**, under which you see Nero Scout.

If you don't want Nero Scout to run, it is simple to disable. Open My Computer, right click on Nero Scout icon and choose Options. Then uncheck the option Enable Nero Scout. Or go **Start | All Programs | Nero 7 Ultra Edition | Tools | Nero Scout**. In the Nero Scout Options dialogue box,



uncheck **Enable Nero Scout** in the upper left corner. Click **Apply** and **OK**. When you next start your computer, Nero Scout should not run.

/Diana Harris

College IT Infrastructure Changes

CSS is deeply into an upgrade and replacement project for the core infrastructure of the engineering computer network. You can read below a description of the current and future environment, complete with diagrams for further elucidation.

For those of you do not need the technical details, read the first section.

What Will I See and Why Should I Care?

As IT people always say, “The [new] system will be more reliable, more automated, and easier to manage.” Those are all aspects of a computing environment that you do not see directly. Some things, though, you may have already noticed and used.

As mentioned before (*Essentials*, August 2008), when we moved home directories to the NetApp this summer, you have access to Previous Versions of files. Previous Versions gives you access to read-only snapshots of modified files; those snapshots are taken every four hours for a day, every day for a week and every week for a month. Moving to the NetApp also meant a switch from a UNIX-based file system to a Windows-based system.

We will increase user quotas with the expanded file storage we gained with the NetApp. We are still working out the details of the increase, which is constrained by the size of our backup system. At the semester break we will announce and implement the new quotas.

Another feature of the new environment will be the ability to have an encrypted directory or to encrypt files. This ability will be useful to faculty and staff who must keep social security numbers but need to do so in a secure manner.

Current Environment

Our current server environment has both physical and virtual servers*. The 30 physical servers support the email system (email requires several servers), back up the database, manage license service, and provide both Windows and Linux file service. The virtual servers run the web server, Retrospect (local hard drive backup), software deployment via Altiris, and authentication requests. There are three servers running VMware ESX server, which is the software that allows running virtual servers. Those three servers support some 60 virtual servers. Virtual servers can be dynamically moved live between hosts without affecting server operation. Both types of servers are connected via a high-speed link to a large storage area network (SAN). In turn the SAN supports the tape libraries used for backups and archiving. The drawing on the next page shows you the current environment.

*Technical details: the virtual server environment consists of three HP DL585 servers. Each 585 has four dual-core AMD processors running at 2.2 MHz with 32 GBytes of RAM. The physical and virtual servers use a dual connected fibre channel (FC) storage area network (SAN). The SAN presents block level storage to the servers from a high performance HP EVA3000 RAID and a near line HP MSA RAID. The SAN also supports two interconnected HP MSL60 tape libraries that are used for backups and archiving.

public_html

Next spring files placed in your public_html directory will be readable from the web server. Thus you will not need to change file permission to make files visible on your web site. The URL for your web account will continue to be <http://engineering.uiowa.edu/~{your accountID}>.

Look for an announcement in a future newsletter.



Virtual Machines for Students

In response to comments by the Engineering Student Council, CSS announces:

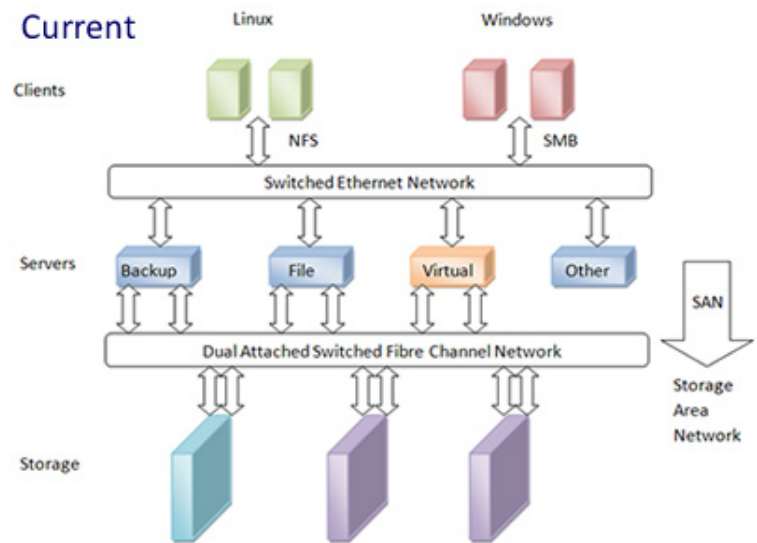
Coming in spring 2009: virtual Windows computers for students. Because of security issues, we discontinued access to demo. engineering.uiowa.edu. When one of the old virtual servers (see the explanation and sketch in the *College IT Infrastructure* article at left) is replaced by a new, bigger, faster computer, we'll use a DL585 to provide a virtual Elder/Hering lab environment to Engineering College students.

New Environment

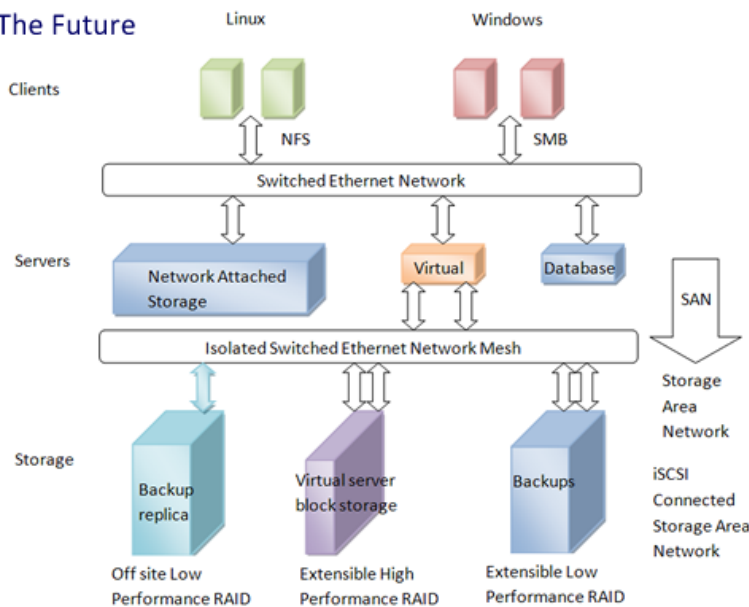
Getting to the new environment includes upgrades and replacements and more virtualization. The three virtual servers will be upgraded to newer, more capable hardware, and the existing virtual servers will be used for different services.** The Unix file servers, the backbone of the engineering computing environment for many years, have already been replaced with the NetApp 2050, which uses Windows as its file system. (That is a big change.) The NetApp has two built-in file servers that deliver files to both Linux (using NFS) and Windows computers (using SMB). Backups for the NetApp will be written to a new iSCSI storage area network; those backups will be replicated off site, as recommended for disaster recovery. All but about 3 physical servers will be virtualized and provide email, backup, deployment, and naming service (so that network resources can be referred to by name rather than IP address). Here's what the new environment (The Future) will look like (see below).

**More technical details: The three VMware ESX servers will be upgraded to three HP DL785s with eight quad core 2.2 GHz AMD processors that have hardware support for virtualization. Each HP 785 will start out with 256 GByte of RAM.

Current



The Future



The NetApp 2050 has an internal SAN interconnecting multiple RAID shelves which will be backed up with a virtual server to block level storage on the iSCSI SAN. The backed up files will then be replicated to an offsite RAID. The iSCSI-based SAN will replace the old fibre channel SAN. iSCSI is an IP-based remote drive protocol for connecting to a RAID over a standard Ethernet network. The tape library will be replaced with near line RAID storage from Equallogic that will be automatically replicated off site to a similar RAID system. The Equallogic will be accessed through a meshed set of network switches which provides multiple network paths for load balancing and redundancy in a failure or upgrade situation.

For help understanding terms like RAID (redundant array of independent disks), SMB (server message block), and NFS (network file system), SAN (storage area network), iSCSI (internet small computer system interface), the editor suggests using your favorite search engine or [Wikipedia](http://en.wikipedia.org).

/Doug Eltoft