Virtualization: Transforming the Datacenter
By: Lee DeAngelis, System Administrator

No doubt by now many of you have heard the IT buzz words "Virtualization" and "Cloud Computing" being used more and more often. Vendors and IT professionals all over the planet are rushing to take advantage of virtualization technologies. But what does virtualization actually mean? Why is it so incredibly important to today's IT professionals as well as our students, faculty and staff?

Virtualization is the creation of a virtual (rather than actual) version of something, such as an operating system, a server, a storage device or a network resource. Hardware virtualization is the use of software to allow a piece of hardware to run multiple operating system images, called "virtual machines", at the same time. Think of virtualization as "car pooling". On your way to work, take a look at the other cars on the road. Most are capable of carrying 4 or 5 people, yet most are only carrying one. In this analogy the car is the server and the people are the services or applications on the server. Most cars (servers) are only transporting 1 person (service) when they really could be transporting 4 or 5. Virtualization enforces a "car pool" of sorts, making sure that the cars are filled rather than just being driven by a single person.

Virtualization is by no means a new concept. It was first developed by IBM in the 1960s to partition, or carve up, large mainframe computers for better hardware utilization. This allowed mainframes to "multitask" or run multiple applications and processes at the same time on the same piece of hardware. Today's modern servers face the same problems of rigidity and under utilization that mainframes faced in the 1960s. During the late 1990's VMware re-introduced virtualization to the IT industry and was able to create an enterprise grade virtualization solution that has revolutionized how organizations manage their datacenters. In 2009 VMware introduced its vSphere product and further cemented itself as the industry leader in virtualization technology.

How does it work?
VMware vSphere technology gives us, among other things, the ability to transform hardware based servers into a series of files called a "virtual machine" or what is often referred to as a "VM". It also allows us to run multiple VMs on a single physical platform. These virtual machine server files can be download, uploaded, copied or transferred just about anywhere. This concept is often referred to as "cloud computing". When a service is said to be "In the cloud" it means that a user has no way of knowing where the service or server they are using is located. In fact, it is often the case that the location of the server is unknown even to administrators of the application. It can be in the datacenter down the hall, in a different building or moving from server to server without any noticeable interruption of service. Server virtualization is an integral part of cloud computing because it makes servers more mobile and therefore less susceptible to outages and hardware failures. A server can now move from location to location without end users knowing. When you use popular services like Gmail or Microsoft Live@edu your data and email is stored "in the cloud".

~ More about Virtualization on Page 3 ~
Learning a Valuable Lesson in Classroom Sustainability
By: Robert E. Kennedy, Instructional Technology Supervisor

Mediated classrooms at the University are in very high demand by both faculty and students. These rooms are defined as instructional classrooms containing a projector, computer, document camera, DVD/VCR and a connection for a laptop computer. Many of these facilities also have control systems (Crestron, Extron or AMX) installed to eliminate the need for battery operated remotes.

Twelve years ago, the Office of Instructional Technology (armed with an annual budget) set in motion a dedicated effort to mediate as many classrooms as possible. By August of 2000, new buildings (McGurrin and Brennan) opened their doors and introduced the University community to new classrooms filled with state of the art technology. By 2004 the University was touting 56 fully mediated teaching facilities on campus. Our mediated facilities were looking great until something unexpected happened. The four year “young” Brennan Hall found itself full of four year “old” equipment. A serious problem was beginning to develop. The financial requirement to sustain the upkeep of the mediated facilities was growing.

Although the equipment budget could not support it, the demand for technology enabled classrooms and facilities continued to grow. Fortunately, funding classroom upgrades started coming from other sources to accommodate the growing demand. Facility improvement budgets, departmental budgets, grants and new building initiatives (DeNaples and Condron) were fantastic sources of capital. During the next six years, 82 mediated facilities were added to the University total. The Office of Instructional Technology now supports 161 facilities including 137 projectors, 50 LCD panels, and 25 Crestron control systems. The growth does not appear to be stopping anytime soon. The new Science Center plans to introduce another 40 plus highly mediated facilities. The closing of Loyola Hall only eliminates 5 facilities.

The dilemma currently facing OIT is how will this technology be supported and maintained? The sources that funded the purchases of the equipment were one time funding initiatives. We are now faced with mediated facilities that require a substantial funding source to keep the aging equipment functioning properly while supporting research and implementation of new technologies. OIT is monitoring the mediated equipment and making the most out of funding by replacing key pieces of the equipment to maintain a balance of new technologies and reliable facilities. This process is both challenging and time consuming. Please be patient as our intent is to provide the best possible facilities, however it may take longer than we desire to accomplish the required upgrades.

### Instructional Technology Tip
By: Rob Kennedy and Jason Oakey

**Presentation Woes**

Are you having problems with your presentations and documents not displaying properly on the video projectors in classrooms and conference rooms?

Not all projectors are able to display images in the higher resolutions that are available on newer computers. Our newer projectors are able to display in 1440 x 900 but the older ones display best in 1024 x 768. If you are experiencing problems, try changing the display settings on the computer to 1024 x 768 or 800 x 600.
Why Virtualization ??
By: Lee DeAngelis, Systems Administrator

The PIR division has chosen to embrace virtualization because of the many benefits it provides. Using VMware vSphere the infrastructure group has been able to lower capital and operating costs, such as power and cooling; reduce complexity and improve administration, improve service levels to students, faculty and staff and provide improved high availability, business continuity and disaster recovery.

Over the last several months we have researched, designed and implemented a virtual infrastructure foundation using VMware vSphere Enterprise ESXi and Virtual Center Server. Rigorous testing has led to the creation of a vSphere Production Cluster that takes full advantage of VMotion, High Availability and DRS technologies. These technologies allow VMs to automatically recover in the event of operating system or hardware failure. With VMotion VMs can migrate from one location to another, limiting downtime for software and hardware upgrades.

vSphere allows us to spend less money on physical server hardware by consolidating multiple virtual servers onto one physical server we are also saving on power, floor space and cooling in the datacenter. Physical servers that are converted to virtual servers can then be shutdown or re purposed for something else. In addition, vSphere grants us the ability to create standard image templates for Windows and Linux VM server deployments. This has cut down significantly on server provisioning and upgrade times. Some examples of virtual servers currently in production include:

**Matrix:** The University of Scranton website

**UIS:** This is a service-based portal to many web-based services and tools which allow students, faculty and staff to access and interact with personal information and perform transactions related to their role at the University

**INB:** Server used to log into the Banner system

**Uniprint:** Printing servers for the University

**Footprints:** Numara Footprints Servers are deployed within the virtual environment

**Advizor:** Server for financial planning and wealth management

**Blogs:** University Blog for Provost and VP of Academic Affairs

**Identity Finder:** Server for sensitive information detection

**Groundwork:** A robust monitoring system for our server environment

**Argos:** A web enabled reporting solution designed from the feedback of Banner institutions, resulting in a feature rich and user-friendly tool

Currently about 50% of our servers are virtual machines and the number continues to grow. From time to time we will keep you updated on our progress as we leverage this technology on campus.
Windows 7 and Office 2010 Activation

By: Diane M. Jachimowicz, Senior Technology Services Analyst

IT Services is preparing to begin implementing and supporting Microsoft Windows 7 in computer labs and select offices as early as summer 2010. The first step in preparing to adopt this operating system for campus wide use is to establish the appropriate licensing environment. In previous years, activation of Microsoft’s operating systems and office productivity suites was required only for software purchased from retail stores and Original Equipment Manufacturers (OEMs). Microsoft products purchased for campus use were purchased through Microsoft’s Volume Activation program and included a Volume License Key (VLK) that bypassed the activation process on University owned or supported PCs.

Starting with the release of Microsoft Windows Vista, Microsoft policy now requires the activation of all editions of its operating systems and office productivity packages including the highly anticipated Microsoft Office 2010. The redesigned Volume Activation program is intended to help automate and manage the activation process while addressing piracy, counterfeiting, and product key management problems with VLKs. Counterfeiting is a significant problem for the software industry. According to a recent study by the Business Software Alliance, 41 percent of all personal computer software installed worldwide during 2008 was obtained illegally. While the financial effects are serious to software manufacturers and vendors, with losses estimated at US$50 billion in 2008, the impact of counterfeit software goes beyond revenue loss to software manufacturers. Many consumers who have a counterfeit copy of Microsoft software are unwitting victims of a crime. Additionally, counterfeit software is increasingly becoming a vehicle for the distribution of viruses and malware that can target unsuspecting users, potentially exposing them to corruption or loss of personal or business data and identity theft.*

The new managed installation environment requires the use of Key Management Service (KMS) or Multiple Activation Key (MAK) for product activation. The KMS activation process requires a KMS host key that activates a KMS host computer and establishes a local activation service on the local network. MAK activation activates clients online with the Microsoft hosted activation servers or by telephone. KMS host keys and MAKs are issued under a specific license agreement. These keys can be used only with volume licensing products and cannot be used with retail software or software that is preinstalled on a new computer by an OEM.

*Microsoft TechNet Library

What is the TSC?
The Technology Support Center

What can the TSC do for you?
- Assist customers in using University software, systems, networks, PCs, scanners, printers, and Instructional Technology equipment
- Virus scan portable media
- Maintain supplies in various computing labs (paper, ribbons, toner cartridges)
- Provide assistance accessing the wireless networks
- Assist ResNet users with laptop problems
- Deliver, set up, and assist users with equipment in non-mediated classrooms and conference rooms
- Support electronic equipment in mediated classrooms and conference rooms
- Provide support for University telephone systems
- Provide Royal Card support and services

Where is the TSC?
Alumni Memorial Hall

How do you contact the TSC?
Call: (570) 941-4357
Email: tsc@scranton.edu

Hours of Operation:
Sun: 12Noon—8pm
Mon—Thurs: 8am—10pm
Fri: 8am—9pm
Sat: 10am—5pm

Welcome Aboard
By: Maureen Castaldi, Database Administrator

John Ochman joined the IT Infrastructure Department on March 1st as Assistant Database Administrator. John comes to the University from Cinram Manufacturing. He earned a BS in Computer Information Systems from The University of Scranton and has many years of Oracle and Linux experience. This combination of knowledge will be a definite advantage as The University of Scranton moves its Enterprise Database from an OpenVMS to Linux environment over the next 1 ½ years. John will provide needed backup to the current DBA as they work together to build a more secure and available database environment.
Birds of a Feather
By: Jerome P. DeSanto, Vice President for Planning and CIO

As a CIO I’ve been referred to in many ways over the past two decades, but never a bird. However, I titled this piece Birds of a Feather because a few weeks ago I hosted a dinner in the DeNaples Center for the regional higher education CIO’s and their deputies. This group flocked together in force, with 25 representatives from 11 different schools, to get acquainted, share information, and at times commiserate. In years past, such attendance at an after- hours dinner meeting was unheard of. However, outside of the fact that everyone appreciates a free dinner once in awhile, there were other reasons for the record turn-out.

First, the impact of the economic downturn on higher education has hit Information Technology (IT) organizations particularly hard. Why? The services and tools provided by Information Technology, as well as their very high reliability is must these days for the University to fulfill its purpose of educating our students and running our business efficiently. The reality is that necessary improvements to IT infrastructure as well as the demand for additional services is unavoidable. To “keep the lights on” as well as advance forward is costly. But, IT budgets, which traditionally have grown 5-10% per year, have flattened or declined over the past few years at most colleges and universities. This has caused many CIO’s to re-examine and adjust their plans, and perhaps operating philosophies. How can IT operations, which heavily rely on a plethora of IT vendors who pass on 5% to 10% maintenance and support increases on products and services annually, afford to continue to offer these same services? So, the flock was present to see if anyone had any answers to this question.

Second, IT organizations in higher education deal with similar challenges every day. Although there are about 15 institutions of higher learning in the greater northeastern Pennsylvania region, there has been little talk over the years regarding the notion of shared services. This concept is beginning to see some traction across the country because it is viewed as a way to eliminate duplication, which has a high collective cost associated with it. One might also think that if schools could collaborate more and agree on areas of specialization that could be shared among all participants certain efficiencies could be gained. This is the essence of the idea behind the development and growing popularity of “open source” products. Schools are beginning to flock to these solutions to gain access to lower cost solutions and leverage expertise that already exists elsewhere.

Third, strategies such as virtualization across the enterprise, and use of “cloud services”, which I wrote about previously in this newsletter, dominated the conversation. These strategies hold great promise for cost/time savings and enhanced security (discussed extensively). There was considerable sharing of information about experiences to date with these strategies.

The dinner ended with a promise to reconvene at a half-day mini-conference in a few months to continue this valuable sharing of ideas and information.

Information Security
By: Robyn Dickinson,
Associate Vice President for Planning and Information Management

The Information Security Office will be leading the implementation of an Identity & Access Management solution during the spring and summer months, including engaging members of the IMAC in related planning and policy work. Identity & Access Management is an integrated system of business processes, policies, and technologies that enable organizations to facilitate and control access to online applications and resources, while protecting confidential personal and business information (EDUCAUSE Identity Management Summit, November 2006). Technical planning and vendor selection is currently underway within the Planning & Information Resources division. The Information Security Office recently implemented two systems for intrusion detection and DNS blackholing; designed to strengthen our security posture. The office is also collaborating with the Network Resources department on a project to redesign our remote access systems. This will improve the ability of operational areas to access our technology systems when away from campus, particularly in response to the recent H1N1 threat.
Desktop Computer Changes
By: James J. Franceschelli, Director IT Services

IT Services continues to work with customizing desktops to make them more secure from malware and viruses. Over the past nine months, ITS has updated many of the lab facilities creating a secure environment that allows critical updates, antivirus definition file updates, and third party application updates via KBOX. Any other changes to the lab systems are removed with each reboot of the system. ITS is working on developing the next phase of secure desktops by focusing on office computers. The growing number of virus and malware attacks, combined with the risk of theft of University information on our desktops makes this a high priority in strengthening our IT security. It is obvious that office systems can’t be treated the same way as lab systems, however it is necessary to place greater controls on the desktops systems to limit the installation of applications, viruses, and malware to create a more secure and reliable environment. A secure office system will not allow the installation of applications or malware that could potentially jeopardize the integrity of the system. The most obvious side effect is that a user’s ability to install applications (like screen savers) will be minimized. Creating a secure desktop that minimizes security threats but allows users to accomplish their tasks is challenging but necessary.

IT Services is often limited in being able to provide up to date applications and operating systems on our desktops. Many users are aware that up to now, we have restricted some web browsers and operating systems because of incompatibilities with Oracle, Banner and Cisco NAC. It is essential that we maintain compatibility with these mission critical systems. ITS is very pleased that these vendors recently changed their support paradigms. In January 2010, the Cisco NAC was upgraded to provide Snow Leopard support on our ResNet and wireless networks. In just the past few weeks, Sungard (Banner) and Oracle announced support for Windows 7 and Internet Explorer 8.0. These changes allow ITS to move forward with the implementation and support of these products. In the coming months, updates to Internet Explorer 8 will be made available for all office systems. Work is underway on the standard setup of Windows 7 with the potential for a summer roll out in computer labs and inclusion with any new PC’s that will be deployed.

IT Services and the Information Security Office will soon roll out a Personally Identifiable Information (PII) initiative. Personally identifiable information is information that can be used to uniquely identify an individual’s identity. Common forms include social security numbers and credit card numbers. If this information falls into the wrong hands, it can be used to steal an individual’s identity. This PII initiative will focus on locating and removing PII from all desktop systems. It will include the use of an application called Identify Finder that will scan through a user’s files to determine if it contains any such information. The initiative will include instructions and guidelines for removing PII from desktop systems.

Information Resources provides alternatives for users to store and secure information, like RoyalDrive. RoyalDrive is available for all University employees and provides a secure storage location for electronic files. It is available via the web which will enhance the user’s ability to access information.

Education Mac Lab
By: Deanna Beyrent, Desktop Engineer

The Education department Macintosh lab in MGH 120 was recently upgraded with new (19 total) Apple iMac’s. The new systems are 21.5-inch iMac’s with 3.06GHz Intel Core 2 Duo processors; 4 GB RAM and a 500 GB Hard Drive. They are all installed with the latest Macintosh operating system - Mac OS X Snow Leopard. They are also set up as a standard lab system for security purposes which returns the machine to its original configuration after every reboot. Therefore, any files that need to be saved should be saved on a USB key. There is also a small space on the systems called the “Thawspace” where files can be stored and will not be removed after a reboot.

Instructional Technology Tip
By: Rob Kennedy and Jason Oakey

Hey, keep it down out there!

Lamp hours that is...When you’ve finished your class or meeting please remember to turn the projector off. This keeps our lamp hours down and allows the next user to get started faster. The projectors time out after five minutes without a signal, making it necessary to power cycle the unit. This will cost the next user ten minutes of their class time to restart the projector.

Help us save energy and money by keeping these projectors off when they are not in use. Think of it as a 350 watt light bulb that costs $300.00 to replace in your living room.
RoyalDrive to be upgraded and Encrypted
By: Anthony Gazoo, Applications Administrator

Within the next few weeks an upgrade to the Xythos Web User Interface (RoyalDrive) will take place. The upgrade will include many new features and added functionality. Below are just a few of the highlighted navigation and user experience improvements to be included in this latest version of RoyalDrive.

A Drop Box has been added which is a fast and easy way to collect time-sensitive material and preserve and verify its original state. It also allows you to receive instant notification of document deliveries. With use of the Drop Box, there is no question about when a submission was received or who delivered it.

Restoration of files has been made easier. When a file is deleted, it is sent to the trash. If you want to restore the file, simply navigate to your trash folder, right-click on the item and select the restore option. The file will be restored with all pre-existing permissions and settings on it. There will also be a new sub-folder within the trash folder called overwritten files. One of the most common causes of deleted files are user overwrites. This folder not only lets you retrieve an overwritten file, but you may also select the version of the file you want to retrieve.

Improvements to Wizards such as; “New Folder Wizard”, “Email Wizard”, “Classification Wizard”, and the “Sharing Wizard” are also included in the new version. The Sharing Wizard has been redesigned with additional features and the ability to reveal the type of user to whom you will be sharing information.

Some other improved functionality includes addition of a thumbnail view for certain file types, as well as the ability to add public or private comments on files and folders. More powerful relative date searches can be created and saved. An enhanced Quick Search makes finding content easier and quicker and reduces the need to use the advanced search option. A Quick View option allows users to display the first page of a document, eliminating the need to download and open an entire file to view its content. A Subscription Expiration option will help users easily clear out old subscriptions that are no longer needed. Bookmark folders improve the organization of finding bookmarks.

In addition to the new features and functionality mentioned above, the upgrade will also include a file encryption security module. This module will encrypt files stored within the RoyalDrive repository. When a file is then subsequently requested by a RoyalDrive user (or via a ticket), this module will retrieve the file, decrypt the file and transport the file to the given RoyalDrive user/ticket in a secure manner.

The RoyalDrive user will not notice anything different as a result of the drive encryption. No special functions or steps will be required on the user’s end in order to benefit from this added security. Please monitor the announcements channel in my.scranton.edu for the exact dates in April when the upgrade will take place.

Apple Warranty Service
By: Danielle Morse, Associate Director Desktop Services

IT Services recently met with Apple Representatives to discuss how we can increase our Macintosh services on campus. We are in the process of becoming an official Apple Authorized Service Provider (AASP). This will enable us to diagnose problems, order replacement parts, install parts when they arrive, and confirm normal functionality.

We recommend that you purchase the AppleCare Protection Plan (APP) when you purchase your Apple system to take maximum advantage of the coverage the plan provides. The AppleCare Protection Plan is a uniquely integrated service and support solution that extends the complimentary coverage on your Mac to three years from the computer’s purchase date. This comprehensive plan includes expert telephone technical support, global repair coverage, onsite repairs, web-based support resources, and powerful diagnostic tools.

When the University becomes an Apple Authorize Service Provider, the Laptop Support Center located in Hyland Hall will be able to provide full repair service under APP while you are on-campus. When you are away from campus, you may contact Apple directly, or any AASP or Apple Store for service under AppleCare. Once the service plan is approved, we will let you know.
KBOX
By: Diane M. Jachimowicz,
Senior Technology Services Analyst

Last spring IT Services acquired the KBOX systems deployment and systems management appliances with the intent of utilizing these appliances to reduce or eliminate IT Services’ “sneakernet” approach to software updating and deployment. This spring, the value of that acquisition has been realized.

While previous versions of Banner required a third party application, JInitiator, to correctly run Banner in either the Internet Explorer or Mozilla Firefox browsers, Banner 8 required JPI. JPI stands for Java Plug-In but is more commonly known as Java. While nearly every PC on campus had some flavor of Java, not all PCs had the version of Java required to run Banner 8. Additionally, Java is one of those tricky, third party applications that should be updated regularly so that identified vulnerabilities in previous, outdated versions are patched. The dilemma was how to install the minimum, Banner 8 required version of Java onto 600+ PCs.

Keep in mind that prior to the acquisition of KBOX, the task of updating Java on 600+ machines would have fallen to IT Services staff. It quite possibly would have been a very manual process that required staff members to physically visit and download and install Java onto every computer on campus. Undoubtedly, if the process had been done manually, it would have taken weeks if not months to complete. As the table below indicates, with the KBOX, more than half of all Java installations were completed in just two days.

<table>
<thead>
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<th>Date</th>
<th>Targeted # of PCs</th>
<th>Remaining</th>
<th>Successfully Deployed</th>
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<td>418</td>
<td>102</td>
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<tr>
<td>Feb 23</td>
<td>608</td>
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<td>436</td>
</tr>
</tbody>
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Farewell and Good Luck

Effective February 22, 2010 Denise Gurz has joined the Office of Human Resources as the Human Resources Information Systems/Compensation Specialist.

IT Forum Series
By: James J. Franceschelli, Director IT Services

The next IT Forum will be held on Tuesday, March 23, 2010 at 11:30 in Brennan 509. Anthony Gazoo will provide an overview of RoyalDrive including a focus on scanning from multifunction printers to RoyalDrive, encryption advantages, creating tickets and new features. All members of the University community are encouraged to attend. Prizes will be given and lunch will be served!! Registration required by emailing ITServices@scranton.edu.

Powerpoint presentations from the previous IT Forums can be found online at:

The IT Forums are lunch time sessions that focus around a particular topic and provide a non-technical overview.

VoIP Tip
By: Lisa Notarianni

Did you know you have several voice mail greetings you can set up?

* Press 4 for Set up options
* Press 1 for greetings
* Press 3 to edit other greetings
  (All will be saved separately and none will be erased unless you choose to do so).
* Press 1 for Standard Greeting
* Press 2 for Closed
  (You can use this greeting if you would like to have a schedule set up during your closed hours. This will automatically play.)
* Press 3 for Alternate
  (This greeting is used if you will be away for a short time (vacation, conference etc...)
* Press 4 for Busy
  (This will play if you do not want to see a second caller while you are on your phone. You will only receive 1 phone call and the next caller will hear this greeting.)
* Press 5 for Internal
* Press 6 for Holiday
  (If your department would like a Holiday schedule set up, this greeting will play during those holiday days and times.)
Blackboard acquires Angel
By: Jason Wimmer, Application Administrator

In early May 2009, ANGEL was acquired by Blackboard. At the time of the purchase, Blackboard made several commitments to ANGEL customers regarding product support and the honoring of existing contracts. We are pleased to share with the University community that up to this point Blackboard has kept those commitments.

One of the commitments that Blackboard made in May was related to the support of ANGEL. The University currently uses ANGEL version 7.3 and plans to upgrade to ANGEL version 7.4 after the spring semester, which will be supported until 2012. The next version of ANGEL is ANGEL 8.0, which is currently under development and will be released at a time to be determined. Blackboard recently announced that Angel version 8.0 will be supported until at least 2014.

For the next two years, the contract with Blackboard/Angel will be renewed on an annual basis. During this time, CTE and IT Development and Applications (ITDA) will be looking closely at other learning management system (LMS) products to assess terms of use and functionality. Other colleges and universities will be contacted, especially AJCU schools, to stay abreast of their LMS experiences and plans. Any investigation at this time will be purely informal. A formal LMS investigation and search process, if found necessary, will involve members of university faculty and staff, however there is no immediate plan to begin a formal LMS search.

Student Laptop Support Center
By: Danielle Morse, Associate Director Desktop Services

Dell laptops covered with a four-year warranty purchased through the Student Laptop Purchase Program will receive hardware support by the Laptop Support Center located in Hyland Hall 114 Monday thru Friday 9am – 4pm. Dell certified technicians will handle service requests on campus with next business day parts delivery, providing quicker turnaround for the majority of technical difficulties. Participants in the Student Laptop Program are also eligible for loaner laptops, another program benefit in the event a hardware issue cannot be resolved by our staff within 24 hours. Students are responsible for backing up their data BEFORE bringing the laptop in for service. You need to bring your own laptop, power cord, and University ID to obtain service.

All recommended laptop models purchased through our program come with a four-year Complete Care Accidental Damage Service in addition to a four-year manufacturer’s warranty. These warranties cover all equipment malfunctions and accidental damage claims at no additional cost. All warranty claims can be conveniently handled through our Laptop Support Center.

Identity and Access Management/ Active Directory
By: Lorraine Mancuso, Director Project Management Office

The Project Management Office is coordinating the Identity and Access Management (IDAM) initiative (see related article on page 3) and the implementation of Active Directory. The IDAM system will help manage access to a diverse set of identities both inside and outside the organization. This must all be done with a keen eye on security and becomes a critical foundation for the management of information and applications. Tightly coupled with the IDAM initiative is the implementation of Active Directory (AD). AD will strengthen our ability to further secure our assets and applications. The past several months have been dedicated to understanding “which” applications and services should interface with Active Directory. The spring semester will focus on “how” those interfaces will be delivered.

If all goes well, it is possible that a phased roll-out of the IDAM solution and AD could begin this summer.
End of an Era: Antivirus Product Evaluation
By: Diane M. Jachimowicz, Senior Technology Services Analyst

McAfee VirusScan Enterprise has been the standard desktop antivirus solution for more years than most folks can remember. Although it has served the University community well for many years, McAfee’s current configuration is regularly challenged and often defeated by today’s ridiculously sophisticated and aggressive malware. IT Services spent part of the winter months researching antivirus solutions and will continue this spring with antivirus product evaluations. Time is critical as IT Services needs to select a replacement product by May 2010 in order to implement the chosen product in University lab facilities during the summer lab refresh/replace process. Criteria being considered during the evaluation process include:

Performance – A solution that does not impact or degrade the computer’s performance.
Protection – A solution that does not allow a system to become infected ... ever.
Transparency – A solution that is easy to use and manage and is invisible to its users.

Current licensing for McAfee VirusScan Enterprise expires in June. Staff and faculty can expect to receive communications from IT Services early this summer about McAfee VirusScan removal and the replacement product’s installation.

Tip from the TSC
By: Gail Bontrager

Reset Your Own Password
You can reset your myScranton password any time by simply filling out the password reset questions.

Login to myScranton
Click on the Home tab
Locate the Emergency and Password Information channel
Click on Select your Password Reset Questions
Select three questions and provide answers to them
Click the Update Questions button

The next time your password does not work and needs to be reset, navigate to the myScranton login page and click on the Forgot your password link. Answer all the questions correctly and a new random password will be displayed that will allow you to log into myScranton.

Work Study Students for OIT and TSC
By: Jason W. Oakey, Instructional Technologist

Starting last October and continuing though early December we instituted a new approach to our student training with a focus on customer service. This was presented with a Power Point presentation and an informal lecture to small groups of students. Physical technology was addressed based on the questions the students would pose. We also reviewed some technology that wasn’t commonly used but supported such as the erection of a large projection screen. In November 2009, TSC student staff were trained on trouble shooting instructional technology problems (especially audio problems and video projector problems), trouble shooting instructional technology equipment in The DeNaples Center and Brennan Hall, and setting up various instructional technology equipment (large screens, camcorders). Additional training sessions were provided in January and covered additional site specific information.

Our efforts to continue to improve student staffing, team building, and skills continued into the Spring Semester. On Jan 31, 2010, all ITS & TSC work study students and ResCons were invited to attend a Welcome Back event where students participated in team building activities as well as receive updates on departmental projects, policies, and procedures. Fr. Terry Devino provided the students with a short talk on service and the Jesuit tradition.
Security Enhancements of the Banner 8 upgrade
By: Connie Wisdo, Director IT Development and Applications

Security Enhancement Number One:
Access to all in-house applications will be controlled by authentication via the myscranton portal. You’ll notice that if you try to use an old, bookmarked URL in your browser, you’ll instead be prompted to log in to myscranton. This is consistent with other enterprise applications we commonly use, such as RoyalDrive and ANGEL. By restricting the login to a single point, the myscranton login page, we can apply the higher level of security that’s already built into the network, as well as the operating system, and software architecture supporting the myscranton portal.

Due to this change, you can no longer merely type in an auxiliary form name after "Go to:" prompt on the main Banner form NOR open a browser session and copy/paste a URL pointing to an in-house, developed application. The recommended method to launch such forms and applications is to:

1) Login to myscranton, click "Employee" tab,

2) Then, if using Banner, right-click on the Internet Native Banner link and choose to "Open in New Window".

3) Go back to the Employee tab, locate the desired process in the "Applications" channel, e.g. YWEBQRY / Web Query (found under the Public sub-heading).

4) To find an application easily on the Applications channel, use CTRL-F and type the name of the application in your browser’s search box.

If the application isn’t found in the Applications channel, look on the University Links tab. If not found in either of these locations, please put a project request into the Project Tracking system to have it added. If you are not familiar with the Project Tracking system, please contact the Technology Support Center (941-4357) for assistance.

Security Enhancement Number Two: Password security has been dramatically enhanced. New or changed passwords must be longer (9 characters) and require at least one letter and one number. Passwords are stored in the database in encrypted format – no one, not even the Information Resources staff will be able to view an individual’s established password.

Security Enhancement Number Three: Computers connected to the network in student labs or via Royal Air (wireless) are no longer able to access the Banner servers. access has been blocked at the firewall. The student dorm network is also prevented from accessing Banner servers in this manner, and has been for a number of years. Now doesn’t it make you feel better to be more secure?

Problems with any of the above?
If you should experience any difficulty with any of the new, enhanced security measures, please contact the Technology Support Center (techsupport@scranton.edu). Remember, it’s always best to contact the TSC by email, with attached screen prints of any error messages or issues you may be having. The more detail the better! It helps us to resolve your issue more quickly.

The National Survey of Student Engagement
By: Nicole Armezzani, Institutional Research

The Institutional Research Office is administering the National Survey of Student Engagement (NSSE) this spring. The NSSE opens on February 22, 2010. The web-based survey is administered to a random sample of freshmen and seniors. The goal of the survey is to help the University maintain and improve institutional effectiveness. The results will be available in late summer 2010 and a results analysis will be available fall of the same year.

Please help support the Institutional Research Office and the University of Scranton by completing the survey, if you are a selected student and by encouraging student participation, if you are a faculty member.
Pennsylvania Banner User’s Group
By: Cindy Hricko, Assistant Director
IT Development and Applications

PABUG’s mission is to develop and maintain a network of Pennsylvania higher education SunGard Higher Education Banner users to promote effective use of SunGard Higher Education Banner technology within each member institution and to act as a collective voice to influence SunGard Higher Education product and policy direction. PABUG was formed as the result of a meeting conducted at Villanova University on Oct. 6, 1999. The original group consisted of 17 Pennsylvania Banner schools which has grown to 26 Pennsylvania Banner schools.

The tenth annual PABUG Conference was held in November 2009 with more than 400 attendees and 15 vendors. Participants in this year’s 2-day conference represented 55 institutions from 10 states across the country. The Conference consists of different track areas including Accounts Receivable, Admissions, Advancement, Finance, Financial Aid, Human Resources, Luminis, Student, and Technical. Collaboration, sharing of information and a common voice to Sungard Higher Education has been key to the success of the organization.

The organization has recently updated its web site (www.pabug.org), so be sure to take a look. Currently, we have two Track Leaders representing our institution including Carl O’Neil for Advancement and Lynn Pelick for Student. Paulette Karlavage for Payroll and Margaret Hynosky for Financial Aid have just rolled off terms for track leader in their respective areas. Cindy Hricko serves as the institutions’ Board of Director Representative.

Mobile Device Handbook
By: Diane M. Jachimowicz, Senior Technology Services Analyst

Smartphone selection and use is a relatively personal thing. Device features desired, used and liked by one person might not be features needed, wanted or used by another. One person may use a smartphone in a way another person could never even imagine. IT Services has always struggled with supporting smartphones given the personal nature of device selection and use. Historically, the goal of the smartphone support program was to standardize upon one device or platform that would best support synchronization with corporate email (RoyalMail) and corporate calendar (RoyalCal) particularly for devices charged to University budgets. This goal was frequently challenged as smartphones changed and, became more sophisticated, readily available and desirable.

This spring IT Services is launching a self-service support website to assist smartphone users with acquiring smartphones and configuring devices to synchronize with RoyalMail and RoyalCal. The Mobile Device Handbook is a collection of web pages that contains information about mobile device security, cellular service provider selection, battery life extension tips, international travel considerations, and third party calendar synchronization tools. The handbook also contains instructional videos for configuring RoyalMail and RoyalCal and setting a four digit PIN on Windows Mobile and iPhone devices.

In addition to launching the Mobile Device Handbook, IT Services will also begin providing limited support for smartphone devices at the Laptop Support Center in Hyland Hall between the hours of 9am and 4pm, Monday through Friday. While cell phone and smartphone orders charged to University budgets will still originate at the Technology Support Center in Alumni Memorial Hall, smartphones will be distributed and supported from facilities located in the former University Bookstore in Hyland Hall. Individuals with smartphones charged to University budgets are now able to acquire (with the proper approval) any device they choose (e.g., Windows Mobile, iPhone, Blackberry, etc.), but should remain aware that support at the Laptop Support Center is limited to Windows Mobile and iPhone devices only. Individuals who acquire University funded smartphones that are not Windows Mobile or iPhone devices will need to rely upon the information provided in the Mobile Device Handbook for support. Individuals who have personally owned smartphone devices and wish to synchronize with University resources should also refer to the Mobile Device Handbook for guidance and support.

Desktop Tip
By: Wendy Diehl

Set your default browser and e-mail:
Click Start
Select Set Programs and Defaults
Click radio button for Custom Button
To choose a default web browser, click radio button for Internet Explorer
To choose a default email program, click radio button for Mozilla Thunderbird
Click OK
The Sustainable Classroom
By: Robert E. Kennedy, Instructional Technology Supervisor

When architects, facilities personnel and environmentalist talk about the sustainable classroom they refer to things like natural lighting, low energy consumption, environmentally friendly building materials and furnishings. OIT personnel refer to the cost of the technologies installed and their usefulness over time. This article will focus on the later. When planning for the technology of a sustainable classroom, designers should focus on four key areas: type of equipment, ease of operation, staying power (useful life cycle), and cost.

The type of equipment selected should be able to be used in multiple environments including; classrooms, conference rooms, board rooms and other presentational facilities. This standardization of equipment is critical to maximizing budgets and reducing replacement costs. The equipment should also have usefulness in most educational disciplines including the sciences, history, language arts, theology and music. A computer, document camera, DVD player and projector can enhance almost any presentation.

Considering the ease of operation and integration by the faculty is essential when designing the classroom. The most sophisticated equipment in the world is useless if it is difficult to use or fails. If faculty can’t quickly and easily operate the equipment, the equipment will not be used. Likewise, if it is a time consuming process to setup and integrate the equipment into the lesson plan, it will not be used. An integrated control system like Extron, Crestron or AMX is an excellent way to simplify the operation of the equipment.

Staying power or “useful life cycle” of the equipment is also very important. Equipment with short life cycles needs to be installed in such a way as to be easily accessible for maintenance and replacement. Equipment that is consistently evolving, such as computers and projectors, tends to have very short life cycles. Average life cycles can vary greatly between equipment but the general rule is that most equipment should be refreshed every three to seven years. Even infrastructure needs to be replaced due to advancements in technology. CAT5 and VGA cables can no longer keep up with technology’s demands and need to be replaced with CAT6 and HDMI cables.

Short life cycles and general maintenance are key problems for projectors. They typically come with a two to three year warranty but the life span should not be stretched over 5 years. One reason for the short life span is that projectors tend to dim over time as the LCD panels burn. Even with scheduled lamp replacements, the second lamp will never be as bright as the first and the third will never be as bright as the second. Another problem is that the resolution can’t keep up with the computers. Less than 2% of the projectors on our campus can natively support the resolutions of today’s laptops. Laptop users are forced to lower the resolutions on their laptops so that they can display them on the projector. Additionally, the projector has to run compression algorithms to convert the image to a usable format. This compression degrades the quality of the images being shown.

Planning mediated facilities requires consideration in creating a facility that is both functional and maintainable. The facility needs to be fully functional for our end users and at the same time allow for future upgrades and replacements.

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<tr>
<th>Average Life Cycles</th>
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<tbody>
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<td>Computers</td>
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PMO Established in PIR Division
By: Lorraine Mancuso, Director Project Management Office

Roughly one year ago, the PIR Division established the Project Management Office (PMO). The role of the PMO is to guide major divisional initiatives across the IT Infrastructure and Services departments ensuring the delivery of successful projects through effective and efficient resource utilization and improved communication. The Project Management Book of Knowledge (PMBOK) is a best practices guide upon which the PMO has defined a framework and methodology for its operation.

To date, the PMO has supported several PIR initiatives including, but not limited to, the Voice-over-IP Implementation, the upgrade to Banner 8 and the Numara Footprints Service Desk Implementation. Utilization of project management best practices has been helpful in guiding these projects.
From the VP for Planning and CIO

Why Business Continuity
By: Jerome P. DeSanto, VP for Planning and CIO

Prior to the events of 9/11 I doubt anyone ever thought about business continuity. In a moment’s notice a horrifying event with a very low risk of occurring could in fact happen that would severely disrupt businesses, not to mention the death, injuries, and destruction. Most recently the earthquake in Haiti qualifies as such an event. Hurricane Katrina that wasted New Orleans and surrounding communities for years also needs to be mentioned. These are without any argument cataclysmic events that undoubtedly resulted in great loss of life and disruption to business in those geographic areas and beyond.

However, other events such as pandemics, electrical power interruptions, floods, airline crashes and numerous others could possible occur that would hamper a firm’s ability to operate. As a University with a primary mission to educate our students, what would we do if we couldn’t conduct our education business and supporting services for days, weeks, or even months? How could we ensure the continuation of our business if one of these relatively low percentage risks were to become a reality?

These are the reasons that so many businesses have developed or are in the process of developing business continuity plans. There are numerous consulting firms that have sprouted up to deal with the burgeoning demand for help in designing these plans. Many large companies have established a business continuity office to deal with all the complexities of business continuity. Recently, the Wall Street West initiative funded primarily with public money was primarily targeted at preparing a workforce in Pennsylvania to assume the business continuity responsibilities of Wall Street firms in the case where New York would be beset again by some catastrophic event. As the Wall Street West initiative is in its waning days, an announcement was made at Misericordia University a few weeks ago about the creation of a Center for Business Continuity in Northeastern Pennsylvania. In addition to creating awareness and education it is hoped that such a center would become a catalyst for such planning across all sectors in Northeastern Pennsylvania and beyond.

A few years ago the University made significant progress in the development of a plan. However, this effort stalled and has recently been restarted. The importance of being prepared has never been more relevant than today. Last month crippling snowstorms hit the eastern seaboard in areas where snow is a rarity. Although this event introduced only a few days disruption to government, business, and educational services in that region it is a stark reminder that planning for the unexpected is a necessity.

Cisco NAC
By: Danielle Morse, Associate Director Desktop Services

You may ask, "What is Cisco NAC?" Well, we’re glad you asked. Cisco NAC (Network Access Control) is a network authentication system that verifies every user who logs onto the network is a University student, faculty, or staff member. In addition, it automatically certifies that machines are protected against the latest threats. It accomplishes this amazing feat by checking each computer for the minimum security requirements.

During Intersession 2010, Cisco NAC was upgraded to version 4.7.1. This upgrade permits Windows 7 (except starter edition) and Macintosh OS X (Snow Leopard) computers to connect to ResNet and RoyalAir. All students returning for Spring 2010 were prompted to upgrade to a new Cisco NAC agent upon first login. Optional Critical update checks were also put in place for the first two weeks of the semester giving users a chance to update their systems at their convenience. On February 17, 2010 those critical update checks became mandatory for anyone connecting to ResNet. These steps should help to protect user’s computers from viruses, spyware, and malicious attacks.