2010- 2011 Annual Report: Talking Points and Institutional Effectiveness Statements

Department: Information Technology Services

University of North Carolina at Greensboro

Information Technology Services

1A: Major Client Technology Migrations Completed in 10-11
Providing Department: Information Technology Services

Talking Point

In 2010-2011, ITS completed two far-reaching changes in client "desktop" technology at UNCG – the move from Novell to the new Microsoft Active Directory "General Computing Network," and the migration of faculty/staff email (non-archives) from Lotus Notes to the Google-hosted iSpartan service. Both initiatives are essential to providing more cost-effective and efficient technology services, allowing continuation of high-quality service despite recent budget cuts.

[Note: Additional details are provided in talking points #1B and #1C.]

Audience: Internal: ☑
Audience: External: ☑

Established Date: 7/1/2010
Ending Date: 6/30/2011

Related Items
U-V03: Sustainability

U-R03: Technology or Technological Support

U-AR01: Teaching

U-SG01.07: Online Degree Programs

U-SA01.0: Access to Education and Student Success

1B: "General Computing Network" - Novell to Active Directory Migration
Providing Department: Information Technology Services
Talking Point
In June of 2011, ITS completed the move of campus departments to the new Active Directory "General Computing Network" (GCN) environment for network file space, printing, and application delivery. The legacy Novell environment was decommissioned on June, 24th.

The migration required the move of over 4,000 computer workstations and more than 2,500 faculty and staff accounts, as well as network file space for 37,290 student accounts. ITS upgraded most departments' computers to the Windows 7 OS (32-bit version), adding support for the Windows 7 64-bit OS in May, 2011.

Cost benefits of consolidating the mixed Windows and Novell server environment into a Windows-only server environment include:

- eliminating the need to have two sets of personnel, hardware, software, administrator tools, licensing and maintenance costs
- repurposing of technical staff who supported the Novell platform to the Windows support team, enabling ITS to continue meeting growing campus support needs

- significant institutional savings on software licensing and maintenance costs - $48,000 in 11-12, with an additional $80,000 projected for 12-13

- reduction of our overall campus data center footprint and energy

consumption by 21 enterprise servers and 20 Tb of network storage

Service benefits of the GCN include:

- an environment designed to be fully extendable to and customizable by distributed technical staff to meet unit/department-specific needs
- a computing environment that is more stable, more secure and, therefore, more highly available

    - moving computing devices off of the public internet and onto a private campus network makes them substantially less vulnerable to intrusion and attack

    - use of centrally managed computing policies ("GPO's") facilitates local workstation configuration/administration and lowers the risk of workstation compromise

    - automated workstation patching and virus definition updates provide a more stable computing environment, while better protecting the University's data assets

- improved mobility including

    - the ability to move computers with wired connections from one location to another across the campus without technical staff intervention

    - seamless connectivity and functionality between the wired and wireless networks

- reduced personal responsibility for ensuring that computers are in compliance with University computing and data security standards

- less time loss due to technology failures in campus offices, labs, and classrooms

Audience: Internal: ☑
Audience: External: ☑
Established Date: 7/1/2010
Ending Date: 6/30/2011

Related Items

U-V03: Sustainability

U-R03: Technology or Technological Support

1C: iSpartan Email/Calendaring Migration
Providing Department: Information Technology Services
Talking Point
#1C - Email/Calendaring Migration

From Fall 2009 through early January 2011, ITS moved approximately 4,000 faculty and staff email accounts from Lotus Notes to the UNCG's iSpartan service hosted by Google. iSpartan is UNCG's implementation of Google Apps for Education, and was implemented as the campus-wide email system for students in August, 2008.

Major accomplishments of the faculty/staff migration include:

- Move of ~4,000 client (non-archive) email, calendar and contact stores from Lotus to Google through an automated process that avoided labor-intensive office visits
- Reduction in ITS/University hardware and software costs to maintain email and calendaring services, including email archives and spam/virus filtering

    o estimated annual savings of ~$26 per faculty/staff email account, in addition to ~$3/student account savings

- Reduction in ITS staff time required to maintain the email and calendaring systems, resulting in:

    o overall reduction of staff FTE dedicated to these activities

    o re-allocation of staff to under-resourced activities (e.g., AD/Windows infrastructure development and maintenance)

- o more efficient work in areas with service-request backlogs (e.g., less time required for "desktop" email client maintenance)

- Better capability to support email/calendar access for a variety of mobile devices, especially the iOS and Android platforms that are continuing to gain market share

- Introduction of Google Talk as the first text/video chat client supported for University-wide use, at no additional hardware and software cost to the University

- Introduction of the first (non-Blackboard) web and document collaboration tools for University-wide use with Google Sites and Docs, at no additional hardware and software cost to the University

  - o [Note: While faculty and staff had gained access to the new Google tools (e.g., Docs, Sites, Talk) at the same time as students (in 2008), their adoption of these tools was accelerated by the move to iSpartan for email/calendaring.]

- Completion of account provisioning and other infrastructure work also has created the foundation for expanding iSpartan to include additional applications of interest (e.g., Blogger and Google Analytics)

Audience: Internal: ☑
Audience: External: ☑

Established Date: 7/1/2010
Ending Date: 6/30/2011

Related Items
U-V03: Sustainability

U-R03: Technology or Technological Support

U-AR01: Teaching

U-SG01.07: Online Degree Programs

U-SA01.0: Access to Education and Student Success

1D: Technology Services for Online Learning

Providing Department: Information Technology Services

Talking Point

Robust and reliable technology services are required for successful delivery of online classes, and high-quality, timely support services are essential to promote student success. In 10-11, despite a constrained budget environment, ITS made several strategic investments to promote better technology services for online learners, as well as students in general. Efficiency gains for other services (e.g., General Computing Network and iSpartan email outsourcing) help to enable service expansion in strategically important areas.

[Note: Additional details are provided in talking points #1E and #1F.]

Audience: Internal: ☑
Audience: External: ☑

Established Date: 7/1/2010
Ending Date: 6/30/2011

Related Items

U-R03: Technology or Technological Support

U-AR01: Teaching

U-SG01.07: Online Degree Programs

U-SA01.0: Access to Education and Student Success

1E: Technology Services for Online Learning – New or Enhanced Services

Providing Department: Information Technology Services

Talking Point

FY 10-11 new or expanded services of importance to online learning included:

- **Expansion of Service Desk hours -** Service desk hours were expanded to include evening and weekend coverage to better accommodate student needs. The Service Desk is also open during the Winter Holiday break to provide services to Winter Term (online) students.

- **Elluminate ("Blackboard Collaborate") Campus-wide Enterprise License -** The Elluminate web-based conferencing software provides functionality required for online synchronous learning, including screen sharing, collaborative whiteboards, text chat, audio and videoconferencing, and powerful administrative features such as the ability to record Elluminate sessions for those unable to participate in real time. In spring 2011, ITS entered a 3-year enterprise Elluminate license that covers all campus usage, including student organizations and non-classroom training activities. This contract superseded a previous DCL contract for distance learners, and provides an opportunity for expanded use of Elluminate that can facilitate online learner participation in campus organizations and training opportunities that may have previously required travel to campus.

- **Creation of an Online Learning Technology Specialist position -** ITS hired a technology specialist to focus on online learning technologies including Elluminate and Blackboard student support. This position will play a key role in the forthcoming UNCG implementation of Blackboard Mobile Learn.

- **Qualtrics Web Survey Tool -** In summer 2010, ITS implemented Qualtrics (uncg.qualtrics.com), a robust web-based survey system that ITS manages with costs shared between ITS and the Office of Research. Because the survey system is web based, it is as easy for an online class to use as for an on-campus class.

- **Instructional Linux Environment (ILE)-** In Fall 2010, ITS

announced the availability of the new Instructional Linux Environment (linux.uncg.edu) for faculty and students who need to run specialized software on a Linux platform (e.g., for programming classes).   This service is as accessible to remote/online learners as to those on campus.

- **Launch of UNCG's iTunes Service -** Launched in early 2011, iTunesU@UNCG provides an additional platform for faculty and students to share interactive video and other multimedia files, with no hardware or software costs to the University.

- **Banner D and M Course Charging Model Changes-** ITS implemented Banner modifications to complete this University high-priority project requested by the Online Learning Committee. The charging model change encourages participation "distance" (online) courses by not assessing additional charges for *full-time* on-campus students when adding distance courses.

Audience: Internal: ☑
Audience: External: ☑

Established Date: 7/1/2010
Ending Date: 6/30/2011

Related Items
U-R03: Technology or Technological Support

U-AR01: Teaching

U-SG01.07: Online Degree Programs

U-SA01.0: Access to Education and Student Success

1F: Technology Services for Online Learning – Preparation for Additional Service Enhancements

Providing Department: Information Technology Services

Talking Point

In addition to new or significantly expanded technology services, ITS continued to support and enhance existing services of interest to online learners, including the Blackboard Learning Management System, iSpartan, the Virtual Computing Lab ("VCL"), the University Telelearning Center, Streaming Media Services (Flash server), discounted hardware and software sales (including laptops directly shipped to student homes), and UNCGenie for Banner Self-Service. Significant service enhancements are scheduled for summer 2011:

- ITS is working with the University Teaching Learning Center to plan for the August, 2011, upgrade of Blackboard to version 9. Blackboard 9 has a substantially improved interface, and UNCG's implementation will include Blackboard Mobile Learn for mobile device access to the Blackboard Learning System. The Mobile Learn technology has been described as "critical" to students by the President-elect of the Student Government Association.
- ITS began preparations for significant expansion of the tools available for online collaboration and information discovery in UNCG's iSpartan Google Apps domain. For online learning, the "Blogger" tool is especially of interest.

ITS also completed research regarding a potential new service:

- At the request of the Academic Technology Coordinating Committee (ATCC), ITS researched and provide a recommendation for automated text transcription and captioning services that would help departments meet accessibility requirements for online courses. Recommendations from this project, completed in summer 2011, will be considered by the ATCC in Fall 2011.

Audience: Internal: ☑

Audience: External: ☑

Established Date: 7/1/2010

Ending Date: 6/30/2011

Related Items

U-R03: Technology or Technological Support

U-AR01: Teaching

U-SG01.07: Online Degree Programs

U-SA01.0: Access to Education and Student Success

2: Information Technology Services Progress on Strategic Plan
Providing Department: Information Technology Services
Established Date: 7/1/2010
Ending Date: 6/30/2011
Strategic Plan Complete: ☑

Related Items
There are no related items.

3A: Blackboard Mobile Learn Purchase Decision
Providing Department: Information Technology Services

Administrative Institutional Effectiveness Highlight
In Spring 2011, the Office of the Chancellor made ITS aware of strong student interest in mobile device ("smartphone") access to the Blackboard Learning System. ITS worked with the Student Government Association and faculty/staff technology committees to organize a pilot of the Blackboard Mobile Learn system. At the conclusion of the pilot, ITS administered a survey to pilot participants and decided to purchase Mobile Learn based on positive student response. Survey results considered in decision-making included:

- Undergraduate student participants were, on average, **Satisfied** (average = 2.0) with their experience using Blackboard Mobile Learn (satisfaction rated on 7-point Likert scale)
- Undergraduate student participants generally **Agreed** (average=2.13)

that Blackboard Mobile Learn was easy to use (agreement rated on 5-point Likert scale)

- Undergraduate student participants **Agreed** (average=2.0) that Blackboard Mobile Learn would improve the student learning experience

ITS will implement Blackboard Mobile Learn as part of the upgrade to Blackboard Version 9 in summer 2011.
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- Undergraduate student participants **Agreed** (average=2.0) that Blackboard Mobile Learn would improve the student learning experience

ITS will implement Blackboard Mobile Learn as part of the upgrade to Blackboard Version 9 in summer 2011.

SPG03: Support for Client Technology Priorities (Client-Prioritized Projects)

U-V03: Sustainability

U-V04: Responsibility

U-V05: Transparency

U-R03: Technology or Technological Support

U-AR01: Teaching

U-AR02: Research/Creative Activity

U-SG01.04: UNCG as First Choice

U-SA01.0: Access to Education and Student Success

U-SG01.07: Online Degree Programs

U-SA01.0: Access to Education and Student Success

U-SG02.05: Sustainability Practices

U-SA02.0: Health and Wellness across the Life Span

U-SG03.03: Learning Communities

U-SA03.0: Education and Leadership Development

U-SG04.04 : Basic and Applied Research

U-SA04.0: Economic, Cultural, and Community Engagement

SPG08: ITS Support of Access to Education and Student Success

U-V01: Inclusiveness

U-R03: Technology or Technological Support

U-AR01: Teaching

U-I01.3.2: Math Emporium

U-SG01.03: GA Retention Rates

U-SA01.0: Access to Education and Student Success

U-I01.3.3: Student Success Initiative

U-SG01.03: GA Retention Rates

U-SA01.0: Access to Education and Student Success

🐦🏅 U-I01.5.4: UNCG Guarantee

🐦📗 U-SG01.05: Highly Qualified Students

🐦🧩 U-SA01.0: Access to Education and
Student Success

🐦🧩 U-SA01.0: Access to Education and Student Success

🐦📗 U-SG01.07: Online Degree Programs

🐦🧩 U-SA01.0: Access to Education and Student
Success

🏅 **3B: Network File Storage - Service Model Changes to Allow Increased Client Allocations for Baseline Quota**

Providing Department: Information Technology Services

Administrative Institutional Effectiveness Highlight

Throughout the General Computing Network migration project, ITS received feedback from clients that baseline network file space allocations were not sufficient and above-baseline network file space costs were too expensive to allow clients to appropriately utilize network space. Based on this input, ITS made significant changes to network file storage services. The most significant change was that ITS stopped replication ("mirroring") of individual and

department data between the McNutt and Bryan data centers, effectively doubling the amount of space available for client allocations at no additional cost to the University.

The decision was based on data showing increased reliability of University data center operations:

- Over the last five years, UNCG had made significant investments in improving the campus data centers and, while data center outages did occur, the occurrence rate was low.
- Since July 2009, there had been only two instances of data center service outages where client file space access would have been impacted if the data had not be replicated between the two data centers. The first service outage on 10/28/2009 lasted 56 minutes. The second service outage on 2/10/2010 lasted 53 minutes.

- ITS concluded, therefore, that the benefit of increased network disk storage capacity and decreased operational costs far outweighed the risk of service interruption introduced by breaking the mirrors between the two campus data centers.

In the new General Computing Network, ITS has increased individual file space allocations from 1 Gb to 5 Gb and departmental allocations have increased to 200 Gb.

As an added benefit, ending replication of indvidual and department data between the two data centers also reduces the overall file server hardware requirements and energy consumption of the UNCG's data centers.

Established Date: 7/1/2010
Ending Date: 6/30/2011

Related Items
SPG04: Support and Maintenance of Required Technology Infrastructure

U-V02: Collaboration

🐦🔴U-V03: Sustainability

🐦🔴U-V05: Transparency

🐦💻U-R03: Technology or Technological Support

🐦✏️U-AR01: Teaching

🐦⚙️SPG05: Support of University Sustainability Initiative (Environmental Sustainability)

🐦🔴U-V03: Sustainability

🐦💻U-R03: Technology or Technological Support

🐦⚙️U-SG02.05: Sustainability Practices

🐦❄️U-SA02.0: Health and Wellness across the Life Span

🏅3C: Network File Storage - Service Model Changes to Reduce Client Costs for Above-baseline File Storage Purchases
Providing Department: Information Technology Services
Administrative Institutional Effectiveness Highlight
Throughout the General Computing Network migration project, ITS received feedback from clients that baseline network file space allocations were not sufficient and above-baseline network file space costs were too expensive to

allow clients to appropriately utilize network space. Based on this input, ITS made significant changes to network file storage services. ITS was able to offer a tremendous reduction in client costs for above-baseline file storage purchases by

- stopping replication of data between the two campus data centers (see IE statement 3B)
- offering different levels of file storage service based on the backup frequency selected by the client

    o Client input indicated that individuals and departments with needs for above-baseline data storage were able to tolerate different risks for data loss in the event that data recovery from tape backup was required.

    o For the first time, ITS was able to offer pricing that varied by frequency of data backup, thus making it possible to offer even lower-cost services where appropriate.

ITS was able to reduce above-baseline network storage charges from $16.39/Gb/year to no more than $3.15/Gb/year, an over 80% cost reduction in costs to clients. The new cost model for network storage that is separate from Departmental Home Directories or individual User Directories is:

- $3.15/Gb/year for "enterprise" level (daily) backup
- $2.15/Gb/year for "mid" level (weekly) backup

- $1.65/Gb/year for "basic" level (monthly) backup

Established Date: 7/1/2010
Ending Date: 6/30/2011

Related Items
SPG04: Support and Maintenance of Required Technology Infrastructure

U-V02: Collaboration

U-V03: Sustainability

U-V05: Transparency

U-R03: Technology or Technological Support

U-AR01: Teaching

SPG05: Support of University Sustainability Initiative (Environmental Sustainability)

U-V03: Sustainability

U-R03: Technology or Technological Support

U-SG02.05: Sustainability Practices

U-SA02.0: Health and Wellness across the Life Span