You've Got Mail! Managing a Campus-wide eMail Migration

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Abstract

In early 2003, DePauw University recognized the need to upgrade their existing email system, which was rapidly exceeding its capacity. The decision was made to convert the entire campus to Novell's GroupWise solution for email. This presentation will focus on the options considered as well as some of the issues involved, and then discuss the planning and implementation of a campus-wide email migration. We will look at the conclusions that were reached at the completion of the project, as well as some of the perils and problems encountered along the way. This discussion would benefit anyone considering a major software migration or upgrade on their campus.

Background

DePauw University is a private, residential, undergraduate liberal arts college located in Greencastle, Indiana. We have an enrollment of just over 2300 students, and 800 faculty and staff members.

Technology Resources and 361°

A $20 million grant of distinction from the Lilly Endowment supports information fluency and pervasive computing initiatives through DePauw's 361° programs. Special programs for faculty members and students improve expertise in using computers, electronic information and digital technologies. Workshops, IT fluency certification, and on- and off-campus internships are open to all students. There is campus-wide Internet and network access with a data port for each student in residence. 300 public computers and a 24-hour lab assure students access. More than half of all classrooms are equipped for multimedia and Web-based presentations. Campus-wide wireless Internet access is in its pilot stages.

One of the most exciting aspects of 361° is the Information Technology Associates Program (ITAP), which provides DePauw students with an unparalleled opportunity to link a liberal arts education with technology know-how through four years of on-campus internships with a wide range of information technologies.

The Project

The Problem:

In April, 2003, an email was sent to DePauw email users, explaining why the campus was experiencing a problem with the existing email system. An excerpt from that email follows:

Originally the WebMail server was installed to provide a way for faculty/staff/students to access e-mail from home or anywhere off-campus. The number of users has grown steadily as many people have adopted this as their standard way to use e-mail. Through the fall and winter, we would routinely see 800-900 users. In late February and early March, for reasons unknown, the number of users spiked to 1500-2000! The WebMail server has trouble handling this many concurrent users and the mail cluster has trouble with the constant manipulating of mail required by the WebMail (IMAP) system. The result is that when we reach 1500 users, additional users are refused, response on the WebMail server becomes slow, and mail often acts "funny".

So, there are really two problems:
1) The WebMail server is not large enough to handle the large number of users who are trying to use WebMail as their mail software.
2) The mail server (where mail is stored) is having difficulty handling the number of WebMail (IMAP) users trying to store, compose, delete and send mail via this server.

In addition to the Webmail server, users were receiving email through a number of POP (Post Office Protocol) email programs, such as Netscape and Microsoft Outlook. The technical support staff was required to provide support on all of these different email tools.

The Solution:

A committee from the Information Services staff at DePauw began to evaluate email solutions that would provide greater usability and reliability. The committee included members from the Network Services group, Technical Support, and Purchasing, as well as IS management. After considering several email programs, including Outlook and Netscape, the committee chose to implement Novell's GroupWise as a campus-wide email solution. Several factors were weighed in this decision. Among them were: the reliability and scalability of GroupWise; the security options which it provided; additional built-in features, such as calendaring and instant messaging; and a full-featured, web-accessible client.

Once a decision was made, we formed the TigerMail (our nickname for GroupWise at DePauw) Taskforce to plan and implement a complete email migration process for the entire campus. The first step was to procure the new hardware that would house the GroupWise software. DePauw purchased a new server array that would meet the current need, as well as provide plenty of room for future growth.

Because the server hardware arrived later than planned, we were unable to have GroupWise installed and fully functional by the time that our Fall Semester began. That forced us to consider how best to implement the rollout of the new email client while faculty and students were fully engaged in their normal daily routines. Thus, the initial plan was designed to move sectors of the

campus population efficiently, while at the same time minimizing interruptions. We would begin by creating a pilot program to test our implementation procedures, and once we verified these procedures, we would migrate the entire student body to GroupWise during their Fall Break, at the end of October. After the students were completely switched, we would begin a new pilot program for faculty and staff. When faculty and staff returned to campus in January, during De-Pauw's mid-semester term known as Winter Term, they would migrate to GroupWise then. The original goal was to have the entire campus migrated to GroupWise by February.

Once the server was in place and the software installed, we were ready to begin the first phase of our implementation, the pilot phase. We chose to include in our pilot program the ITAP students, as they were technically savvy, and were a small enough group (approximately one hundred students) to test the program effectively without risk of overloading the server.

After the pilot group had tested the Web Access server, we were ready to move the remainder of our students (over 2000) to GroupWise. We sent emails to the students a few weeks before the move, and offered basic training sessions on the new email system. Because the majority of our students had previously been using Webmail, we did not offer them the desktop client, feeling they would be comfortable using a web-based system. When the students returned from Fall Break, we offered additional training on how to convert their existing email to GroupWise. As a result of testing and our initial pilot program, the email taskforce determined that we needed a utility to enable us to easily convert existing email, whatever its original format, into GroupWise. After negotiation with the vendor, we were able to obtain a campus license for UniAccess from ComAxis Technology. This allowed us an automated way to copy email.

As we continued to offer support to our students, we began to identify academic departments that might be willing to participate in our pilot program, along with our IS staff. We had already determined that we wanted to migrate our administrative staff as entire departments, rather than individually. We felt this would provide for greater continuity, as well as making user support more manageable. The original goal was to set up a schedule to work with academic departments this way, as well.

Before we could begin to schedule our staff and faculty members to migrate their email, we needed to collect a great deal of demographic information from them regarding their current email habits. Part of our email taskforce was given the task of creating a survey that we could send out to our entire faculty and staff, and then translate into a database that would allow us to determine when and how to migrate everyone's email. Some of the information necessary included issues such as current email tool (or tools) being used, whether email was retrieved via POP or IMAP, and whether PDA's were being used to access calendar or contact information. Once this information was assembled and collated into a huge database of email habits - sorted by department - we were able to begin the process of scheduling email migrations for our administrative departments. After looking at the database information, we determined that it would be nearly impossible to connect with an entire academic department at one time. As we rapidly approached the end of Fall Semester and the year, we reached the decision at that time to handle faculty conversions individually. We would attempt to work them in between the scheduled staff departments.

We ended the Fall Semester with all active students moved to GroupWise, as well as our Information Services staff, and part of the Computer Science department, who had volunteered to be early adopters. We returned in January with an extremely aggressive schedule to migrate all of our administrative staff during the month. We assembled a team, comprised primarily of technical support staff and technicians, to work with the various staff groups. We had also developed a precise procedure for migrating an individual's email from their existing system to GroupWise. The process went something like this: after determining what email the client used and what they needed to copy into the new system, we would use UniAccess to copy their email folders, and address books if needed, into GroupWise. We would then install the GroupWise client on their system, and offer a brief tutorial on how to use the GroupWise client.

After migrating email for a few of the smaller departments, however, we realized our planned schedule had been overly ambitious. While our procedure functioned very well (once everyone on the migration team learned it), we had seriously under-estimated the amount of time necessary to move mail and properly ensure everything functioned correctly. We had established email quotas for the entire campus: students were given a quota of 50MB of email on the server, and staff and faculty members had 100MB. While these limits seemed reasonable to the taskforce, and were in line with other institutions of our size, they seemed somewhat unrealistic for most of our campus. Because the majority of our staff and faculty members had been using a POP-based email system, there had been no limit to how much email they could keep on their local system. Almost everyone had more than 100MB of email, and many had amounts ranging from 400 – 700MB of mail. Fortunately, early in the migration process, we had become familiar with GroupWise's archiving option, which allows a user to move email from the server back to a local drive. While this solved most of our users' issue with the quota, it still took a good deal of time to copy their existing mail to the server into folders which GroupWise recognized. Then we had to archive the email until they were under their quota.

As we began to implement our campus-wide migration, the TigerMail taskforce gave way to a Rollout Team, which met on a daily basis to determine which departments and which individuals were being migrated, discuss any new issues which might have been encountered, and decide responsibilities for each team member for the day. Because all of our team members had other responsibilities, including installing new systems for faculty and staff and providing technical support for the entire campus, this amounted to an immense juggling act, pulling the team together and figuring out who could go where. Thus, as the month of January wore on, we were faced with the reality that we could not realistically migrate all of the remaining users before the beginning of our Spring Semester. The senior members of the rollout team met, and after looking at the progress made and considering several options, produced a revised, less ambitious schedule for the remaining departments. The new schedule would spread the remaining administrative departments through February and March, with the new goal to have everyone on campus moved to GroupWise by April 1st. This schedule allowed our technicians more time to devote to keeping the campus up and running, and allowed us to work with all faculty and staff as their schedules permitted.

We proceeded on the new schedule throughout February. While the administrative departments were fairly close to our updated schedule, we were having more difficulty scheduling our faculty to meet one-on-one to migrate their email accounts. By mid-February we had successfully mi-

grated over half of our administrative departments, but had moved only 25% of our faculty. Again, the rollout team discussed our options, and it was decided to move the remaining faculty all at once, in a similar fashion to the way the students had been moved. An announcement was emailed to the entire campus, additional training sessions on the new email client were offered, and on March 3rd, the remaining faculty members were migrated to GroupWise. Of course, there are always exceptions. We offered an extension on the email move for those who needed special accommodations until April 7th, but only a few users chose to wait. Thus, between Fall Break and Spring Break, we had managed to move almost the entire DePauw campus to GroupWise.

In conclusion, email has become the primary means of communication for many on our campuses today, and it is one of the most vital applications users have on their computers. Moving an entire campus, even one of DePauw's size, to a new email system is an enormous undertaking. A migration like this requires careful consideration and planning, as well as huge amounts of resources, including people, time, and money. One of the most positive, and perhaps unforeseen, impacts of our email migration was the strengthening of relationships within different areas of our IS department, as well as with other groups on campus. Our team really came together to pull off what at times seemed to be an insurmountable task.

Lessons Learned (*or* What would we do differently?)

- Just switch everyone at once! Don't spread it out over a prolonged period.
- 100MB quota may be adequate for the "average" user, but there are users who will need more than the basic amount.

Obstacles

- Lack of a viable Macintosh client
- Users who want to continue using their existing clients
- Time conflicts within and without the team
- Synchronizing calendars and PDAs

Next Steps

- Macintosh client rollout – we need to work hard to regain the faith of our Mac community on campus
- Investigate best practices for GroupWise – work with key departments and clients
- Communicate effective uses of the new client, including the fundamental skills (message management, shared folders, calendaring, etc.)

*Tiger*Mail Implementation Plan

● **TARGET**

DePauw
UNCOMMON SUCCESS

● **STAGES/TASKS**

HIGH RELIABILITY

HIGH PERFORMANCE

PRIMARY OBJECTIVES

INTEGRATED

August	**October**	**January-**	**Summer '04**
• Install Servers	• Move All Students	• Move Faculty and Staff	• Roll-out instant messaging
• Launch Student Email Pilot	• Launch Staff & Faculty Pilot	• Roll-out Campus Calendaring	• Roll-out additional features
• Define Policies		• Roll-out iFolder	• Continue Training
• Begin Communication Blitz	• Staff & Faculty Training	• Continue Training	
• Student Training (ITAP, RAs)			

OBJECTIVE
• Enhanced email

OBJECTIVE
• Anti-spam & Anti-virus

STANDARDS BASED

*Tiger*Mail

OBJECTIVE
• Local Instant Messaging

OBJECTIVE
• Calendaring

EASE OF USE

● **SUCCESS FACTORS**

- •Systems Arrival
- •Effective Communication
- •Timely Deployment
- •Successful Conversion
- •User Satisfaction

OTHER OBJECTIVES

SCALEABLE

COST EFFECTIVE

● *CHALLENGES*

• Training   • Address Book Conversions   • Message Migrations   • Client Satisfaction   • Systems Configuration