

Beyond Simple E-mail: Upgrading an Entire Campus to Enterprise E-mail and Calendaring with GroupWise

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ABSTRACT

Since the early 90s Drew University has provided basic email services to all students, faculty, and staff, standardizing on IMAP-based email in 1999. First supported in conjunction with the Netscape Communicator and later with Mozilla, the IMAP service has proven to be inexpensive to maintain, but had limitations. Most often cited was the lack of scheduling capabilities, resulting in many departments adopting their own unsupported solutions such as Yahoo! Calendar. The inability of the system to support “push” email services, such as BlackBerry was also a concern.

To address these issues, University Technology began migrating users to Novell GroupWise starting in fall 2005. Pilot users, including the President’s office, were migrated in the fall, with a phased deployment of GroupWise to all users starting in Spring 2006. A cross-departmental task force formed to manage the migration process.

This session explores how we addressed the challenges faced when migrating users from a lowest common denominator IMAP service to an enterprise system such as GroupWise. We will discuss issues involved in communicating with the campus, a phased approach to migration, and the creation of customized support and training for faculty, staff, and students. The session will also address the use of web-based self-service tools to ease the transition, tactical deployment of support to address areas of need, and effective use of tools—such as desktop management and incident tracking systems—to facilitate the migration.

IT staff who are in the process of planning a campus-wide transition of email systems should attend this session.

Categories and Subject Descriptors

K.6.4 [Computing Milieux]: Management of Computing and Information Systems – *System Management*

General Terms

Management, Documentation, Human Factors, Standardization

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Calendaring, Email, GroupWise, IMAP, Migration, Novell

1. BACKGROUND

Since 1987, Drew University faculty staff, and students have taken advantage of a single centralized email system. First supported on an OpenVMS system using DEC’s All-In-One, the system was migrated to IMAP email in 1999. The University has supported Netscape Communicator and later Mozilla as clients for the IMAP mail system. The IMAP-based mail system was migrated from Innosoft’s PMDF to Novell NetMail in 2002, and with that upgrade came an improved web mail interface for off-campus users.

The IMAP based mail solution proved to be very cost-effective to support. All of the University’s mail needs were accommodated by a single server. We were also able to largely automate management of Netscape and Mozilla mail profiles, further reducing support costs. By storing users’ Netscape and Mozilla profiles within user home directories on the network, we were able to easily support roaming users and allow use of the full mail client functionality in computer labs. Management of the network-based profiles was built into our account management system. For users of Drew standard notebook computers, scripts were created to automate the creation of local Mozilla profiles when users first logged in.

2. THE NEED FOR MORE FULL-FEATURED E-MAIL

While the University’s existing IMAP based mail system effectively provided basic email service to the entire Drew community, it was lacking in several important respects. Newly arrived faculty and staff often had experience using an enterprise mail system such as Exchange or GroupWise, and were disappointed by the lack of calendar features. In meetings between Drew’s Instructional Technology Services department and University administrators held in 2004 to discuss their technology support concerns, the lack of an enterprise calendar solution became a recurring theme.

Another often-cited concern was the lack of email “proxy” support, allowing assistants to be granted access to their supervisor’s account without sharing passwords. The relatively limited contact management features in Mozilla were also the source of many complaints. A more robust set of contact management facilities were desired, including the ability to share address books within a department.

The arrival of a new University President in the spring of 2005 further increased pressure to upgrade the email system. The President's office had been maintaining the president's calendar using Palm Desktop in conjunction with a Palm Treo 650, which the president was also using for wireless email. While this was a serviceable solution, there were several important limitations. Firstly, we were unable to offer true "push" email. Accessing mail required a lengthy wireless synchronization process. Furthermore, the president's calendar, which was stored in Palm Desktop on his assistant's PC, could not be accessed by other staff in the president's office. The president also had experience with BlackBerry wireless handhelds in his previous job, which could not be easily supported with the existing mail system.

3. A PILOT PROJECT IS LAUNCHED

Computing and Network Services began a pilot of Novell GroupWise 7 during the Fall semester of 2005. Some staff in the department had already been using GroupWise internally on a small test server for one year, and the University was already covered for GroupWise site-licensing with our Novell academic agreement. Two servers were purchased in October, and a NetWare 6.5 cluster was set up to house the new GroupWise system. The small test system was migrated over to the new cluster and we began migrating the rest of CNS full time staff, as well as the Instructional Technology Services department over to GroupWise.

In addition to technology staff, we also invited a few administrative departments to use the GroupWise system during the pilot phase. The President's Office was among the first to migrate to GroupWise, as well as a number of staff in the University Library who were eager to try the new system. During the pilot phase, CNS acquired a number of BlackBerry devices for use by technology staff who have responsibility for maintaining 24/7 services. A BlackBerry device was also purchased for the president. The purchase of the BlackBerries from Verizon Wireless entitled us to a free twenty user license for the BlackBerry Enterprise Server for GroupWise, which provides for push email and wireless calendar synchronization between GroupWise and the BlackBerries.

Other community members could opt in as desired, as long as they understood that support models and training were still in the development stage and might not be immediately available.

The response to the initial pilot phase of the project was largely positive. The President's Office experienced the most initial benefit from using GroupWise. Using GroupWise proxy capability, the president's assistant was able to directly manage the president's calendar. Read-only proxy access to the president's calendar was also given to other staff members in the office. The solution provided significantly more flexibility than the previous attempt at calendaring with Palm Desktop. Finally, with the BlackBerry, the president had wireless access to his calendar, and true "push" email capability that did not require waiting through a time-consuming synchronization process. The BlackBerry also had a familiar interface which led to higher satisfaction than had been experienced with the Treo.

The GroupWise pilot exposed several stumbling blocks that would need to be addressed for a successful campus-wide deployment, however. First, tools would need to be developed or purchased to automate the migration of email from the old email

system to GroupWise. During the pilot phase, we assisted users with manual migration of email using the Mozilla email client and IMAP. Second, we would need to implement an automated self-service process whereby users could activate their GroupWise accounts and set mail forwarding from their existing email accounts to GroupWise. During the pilot phase, this was a manual process. Finally, we did experience more instability with the early releases of the GroupWise 7 client than we had anticipated, having had a very good experience with GroupWise 6.5 within CNS. Subsequent updates to the GroupWise 7 client have improved the situation dramatically, but client stability was a concern during the pilot phase.

4. AFTER THE PILOT – FORMATION OF A MIGRATION TASK FORCE

With the success of the GroupWise pilot, a cross-departmental task force was formed to consider the issues in migrating the entire campus to GroupWise. Axel Larsson, Enterprise Integration Specialist in Computing and Network Services, was charged as the point person for the GroupWise deployment project, and assigned the job of forming the task force. Representatives from Drew's three technology departments - Computing and Network Services, Instructional Technology Services, and Administrative Computing - were invited. The final task force consisted of: the CNS and ITS department directors; four representatives from CNS, including two from the Enterprise Applications area, one from User Support (Betsy Black), and one from Systems and Network Administration. The ITS representatives included the Staff Development Lab coordinator and Training Coordinator. Administrative Computing also provided two representatives.

The task force members represent all groups who have a hand in the GroupWise migration project and the operation of the system. The Enterprise Applications group within CNS has primary responsibility for the operation of the email system. They are responsible for configuring and maintaining the GroupWise applications on the servers, development and deployment of self-service migration tools, and the self-service migration web site. The Systems and Network Administration group has responsibility for the NetWare Cluster on which GroupWise runs, storage, and system backups. CNS' User Support group oversees the student-staffed Helpdesk. That group is responsible for providing phone, email, and walk-up support to customers requiring technical help with GroupWise migration and use. ITS has responsibility for training and documentation, including development of all of the GroupWise online and printed documentation materials.

The task force meets at least once a month to discuss issues pertinent to the GroupWise roll out. Task force meetings consist of updates on the status of the migration, discussions of feedback that has been received about training, documentation, and other materials, as well as discussions concerning outreach efforts to encourage users to migrate. Task force meetings serve as a focal point for coordinating the entire project. In addition to the general meetings, subgroups within the task force have been formed to address specific tasks. A subgroup consisting of ITS and CNS Enterprise Applications staff was formed to coordinate the web presence for the project, encompassing CNS' self-service account activation and migration tools and ITS' online documentation and training resources. A second subgroup was

formed of ITS Staff Lab and CNS User Support staff to plan a timetable for technology staff site visits to campus administrative buildings in order to assist with migrations.

5. A PHASED APPROACH TO MIGRATION

One of the first charges of the GroupWise migration task force was to create a timetable for the migration of the entire campus. The committee decided on an approach that would occur in three phases, with the already described pilot project being declared "Phase 0".

Some of the problems identified in Phase 0 were the difficulty in converting address books and old e-mail over to the new service and the lack of a "self service" portal where customers could "one-click" populate their GroupWise account. The Enterprise Application group and the student and staff technology coordinators met to discuss documentation and the creation of a "self service" portal. Additionally, EA staffers found a product called "Transend" that will convert IMAP-based mail into GroupWise mail format. When the address book conversion utility in Transend was found to be lacking (it would often hang on blank or corrupt address), a student employee volunteered to write a web-based php script that would convert LDIF files into VCF card format for importing into GroupWise. This was about 90 percent effective (there were still some cases that had to be manually converted and imported), and his script is a Novell Cool Solution.¹

Though students were the last constituency we expected to migrate to GroupWise, we decided to migrate our own student employees so that they could support faculty/staff for their migration and identify any problems or concerns that may exist from a student's perspective.

The Committee decided that Phase 1 would begin in early March and would include any "early adopters." The self activation portal was available, there was limited training and documentation, and limited support was available from the help desk. All incoming freshman accounts were to be created on GroupWise during this phase.

Phase 2 began May 1 and a full push was begun to get existing employees and students to migrate their mail to GroupWise before the mandatory phase when email would be switched to GroupWise regardless of whether the customer wished it to or not.

6. REACHING OUT TO THE CAMPUS COMMUNITY

Throughout the GroupWise project, the project task force has engaged in a wide variety of efforts in order to raise awareness amongst the campus community of the GroupWise migration and to encourage users to migrate early. The project has an extensive web-presence. CNS has created a self-service "portal" site² which provides links to a variety of GroupWise resources, including ITS online documentation, upcoming training, information about GroupWise features, and links to the self-service migration and account activation pages. A key feature of the self-service site is a migration status tracking tool³, which allows users to view the percentage of and who has migrated by department. This creates an atmosphere of friendly competition amongst departments to increase their percentage. News items related to the GroupWise migration are posted to a blog site, which is linked directly from

the self-service portal. In addition to the self-service site, modifications were also made to the standard browser and email start pages used at Drew to inform users about the GroupWise migration. As Drew maintains a highly-managed computing environment, almost all users have a standard Drew PC that displays this browser start page by default.

An aggressive email campaign is also an important part of the outreach efforts. Throughout the deployment, campus-wide emails have been used to inform users about upcoming training and special migration events in an effort to encourage users to migrate. The use of campus-wide email has been an effective tool, as evidenced by spikes in migration activity after each message has been sent.

In addition to these generalized efforts, targeted efforts have been made to encourage migration amongst specific groups. The ITS Faculty and Staff Development Labs as well as the ITS Student Technology Education Lab have both hosted successful "open house" days enabling users to get in-person migration assistance without making an appointment in advance. The GroupWise task force has also presented at the University Staff and Administration Organization's (US/A) periodic general meeting. After the first presentation in February, the task force was invited to give a second presentation at the May general meeting. Both presentations resulted in positive feedback and a spike in GroupWise migration activity.

While the rules of the University Faculty do not allow for a general presentation at Faculty meetings, a written report was placed in the March faculty meeting packet and University Technology was available at the March faculty meeting to answer questions.

7. INCREASING SUPPORT RESOURCES DURING THE MIGRATION

In order to facilitate the migration process CNS and ITS also deployed a variety of additional support resources specifically to assist with concerns related to GroupWise.

Some of the support resources we made available were classes tailored for individual constituencies (faculty, staff, and students); on-demand training offered to departments or groups who requested it; and building "sweeps" to help entire departments make the switch with technical staff present to help with any obstacles that may arise. ITS also purchased electronic training materials from BrainStorm, Inc. and made this self-paced training available to the University community via the web.

Since many students were unable to switch before leaving campus for the summer break, we will offer help, support, and training during housing check-in and beyond in September. Residence Assistants will be trained when they return to campus in August and they will encourage students under their charge to make the switch. Working with International and Off-Campus programs, we've devised a plan to assist students studying abroad migrate to GroupWise before the mandatory date when their email will no longer be available in a netmail format. The Athletic Department was encouraged to migrate over the summer and was asked to encourage student athletes (who traditionally return before the start of semester) to do so as well, since the calendaring and shared folder features are viewed as extremely helpful to the coaches of the various teams and their athletes.

The install of the GroupWise client also places a GroupWise Messenger icon on the desktop and, using this internal instant messaging client, a CNS Helpdesk Support Chat Room was created that is staffed with full-time and student CNS Helpdesk analysts during our open hours. The majority of questions asked and answered in the chat room involved GroupWise, and many resulted in pages being added to the CNS Live Page as “Tips & Tricks⁴.”

8. UNANTICIPATED CHALLENGES

The process of migrating to GroupWise led to a few unanticipated challenges. Since the University employs a highly standardized computing environment, with one fully-supported computing platform (Windows) and software suite, we anticipated that migration from this standard suite of software could be well-tested in advance and would present few obstacles. We did not anticipate a number of non-supported solutions that had been deployed to address specific situations.

The first obstacle encountered was the use of PDA devices and a desire to integrate these with GroupWise. University Technology has never officially supported PDAs, and with the introduction of BlackBerry support for GroupWise, support for PDAs was only officially extended to BlackBerries. Despite the lack of official support, we felt it important to provide some solution for users of standalone Palm and Pocket PC based PDAs, primarily to foster willingness amongst those users to migrate from their proprietary calendaring solutions to the GroupWise calendar. Palm and Pocket PC devices are supported with GroupWise 7 through the PDA Connector software that comes with the package. We have found that this product works well with Palm-based devices and we make it available in an unsupported capacity for this use; however, Pocket PC is more challenging as the software is device-specific and does not support all versions of the Pocket PC operating system and hardware platforms. We still lack a good solution for Pocket PCs and remain hopeful that the upcoming GroupWise 7 Mobile Server, which is to be included with the upcoming GroupWise 7 Support Pack 1, will provide this support.

Another challenge encountered was the proliferation of unsupported calendaring solutions used on campus. University Technology did not provide a supported calendar, so a number of University departments looked elsewhere to meet this need and were using Yahoo! Calendars to coordinate their events. In order to help these users migrate to GroupWise, we needed a way to import their Yahoo! calendar events into GroupWise. Yahoo! does not provide a migration path from their calendar to GroupWise but does provide an export tool that creates a file which can be imported into Microsoft Outlook. Since Novell has added support for Outlook as a full client for GroupWise with the Connector for Outlook in GroupWise 7, we were able to set up a

workstation in the ITS Staff Technology lab with Outlook and the Connector and use this machine to allow users to migrate their Yahoo! data.

We also discovered that a number of users on-campus had been using Microsoft Outlook as their email client and calendar. This was surprising to us, as University Technology had specifically discouraged the use of Outlook for security purposes, and the default install of Office 2003 on campus did not include Outlook. We discovered that many users had installed Outlook as supplied with their Pocket PC devices or installed their own versions of Office in order to circumvent the default installation. While we are unwilling to change our support policy to include Outlook as a supported client for GroupWise, we did seek to provide migration assistance for these users. In order to help users who had calendar data stored in Outlook personal folder stores (PSTs) we first attempted Novell’s PST Migration Utility, which is a free download from the Novell web site. We found this utility to be wrought with problems importing Outlook data and highly unreliable. We eventually discovered Advansys’ free Personal Outlook Migration Pack⁵ which provides very reliable imports of Outlook data into GroupWise.

9. ONGOING MIGRATION EFFORTS

At the time of this writing, Drew’s GroupWise deployment is well into Phase Two of the process and we continue to make significant efforts to encourage users to migrate before it becomes compulsory on November 1, 2006. Non-GroupWise email will be suspended as of that date, though legacy e-mail is still available for transfer from netmail to GroupWise until March 1, 2007, when the server is removed from our system altogether.

The student who is credited with the Novell Cool Solution¹ is currently developing a tool that will simplify moving existing e-mail to GroupWise. This tool will be offered to students as well as staff/faculty and we hope it will help smooth the mass migration activity we hope to see in September.

Through a highly concerted and cooperative approach between the technology departments at Drew, we anticipate complete success in the transition to GroupWise.

10. REFERENCES

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