

Electronic Communications Recommendations

A multi-collegiate team, known as the Electronic Communications Core Team, was created in July 2005 to evaluate the current state of electronic communications on campus and to make recommendations about how to accommodate future electronic communication needs. The core team held numerous interviews, focus groups, and open forums with members of the campus community, as well as conducting student and faculty/staff surveys. All reports are available on the Electronic Communications Review web site at:

<http://www.uiowa.edu/ecommunications>

Observations

Based on the information from interviews, focus groups and open forums, it is clear to the core team that the campus community does not support the uniform adoption of a single email client (Eudora, Outlook, etc.). Many individuals want an email-only solution, while others prefer an integrated email/calendaring solution. Those preferences are based on the user's experience, role at the University, support offered within the local unit, demands of the particular position, and the desire for an appropriate level of technology. Because the University comprises students, staff, and faculty, and those roles are vastly different between, and within, each group, it is not surprising that views regarding electronic communications are divided.

The landscape of electronic communications is ever changing. Whereas a few years ago, most could not conceive of an office without a phone, now many cannot conceive of a position without email, with or without a phone. Though email is now woven into the fabric of campus life, the exact parameters of email are not. Email quota, methods for exchanging large documents, using digital signatures, and managing spam are all issues raised in interviews and addressed in the following recommendations.

Recommendations

The core team recommends that the necessary capital and staff time be invested to enhance the existing open source Blue Cluster and Microsoft Exchange services. Based on cost estimates, we believe that this is the least expensive method to achieve the improvements that the University community requires at this time.

We recommend that Information Technology Services (ITS):

1. Continue to support the Blue Cluster and the Exchange services.
 - Continue to assign accounts to the two services per existing practices.
 - Support any unit that requests moving their entire population from the Blue Cluster to Exchange with appropriate notice.
2. Improve webmail performance on the Blue Cluster.
3. Enhance the Exchange service as needed to accommodate any unit request that, with appropriate notice, their entire population be moved to Exchange.
4. Raise disk quotas significantly. The underlying hardware should be configured to easily handle additional increases in the future.
 - Raise student quotas to at least 50 MB.
 - Raise faculty & staff quotas to at least 250 MB.

5. Improve the quota processing on the Blue Cluster to warn users at the soft and hard quota limits, and make it easier to recover once the disk quota has been exceeded.
6. Reduce the amount of spam.
 - Reduce the amount of spam sent directly to addresses of the style *hawkid@blue.weeg.uiowa.edu* and *hawkid@iowa.uiowa.edu*.
 - Consider implementing more stringent spam deletion policies, such as rejecting all off-campus email addressed directly to *@blue.weeg.uiowa.edu* and *@iowa.uiowa.edu* or extending the existing spam service to filter email directed to *@blue.weeg.uiowa.edu* and *@uiowa.uiowa.edu*.
 - Consider using the existing spam service to filter email going to ITS listservs.
 - Inform the upper level administration that University bulk email is considered spam by some recipients. Bulk mail forwarded to an off-campus email provider may be marked as spam by the recipient, resulting in all UI mail being rejected at that site. See #13 below: create portals to deliver University information to students, staff, and faculty.
 - Inform students about the ISIS email settings to opt out of some University mailings.
7. Continue to support the standard University email address (*firstname-lastname@uiowa.edu*) and off-campus routing. For example, continue to support the routing of email addressed to *john-doe@uiowa.edu* to the off-campus address of *jdoe@gmail.com*. Adjust policies and educate students about the risks of routing email off-campus. See Appendix B for the revised policy. For email policies at other universities, see <http://www.uiowa.edu/ecommunications/policies-other.html>
8. Provide the infrastructure to allow faculty, staff, and students to easily send email from off campus using the same desktop email client (Eudora, Netscape, Outlook, etc.) used on campus.
9. Better publicize desktop client availability for both on and off campus use.
 - Full-featured email clients (Eudora, Outlook, etc.) and the Internet Messaging Application Protocol (IMAP) include capabilities that many would use if they knew about email options other than a web-based email program and the Post Office Protocol (POP). A message on the webmail and the Outlook Web Access (OWA) logon screens could direct users to appropriate information.
10. Coordinate with other email providers on campus and at other Regents institutions to align message size policies and filter/reject policies.
11. Consult with other email providers both on and off campus/on campus to propose and support methods of moving and sharing large files now sent via email.
12. Accommodate sending encrypted documents and using digital signatures.
13. Study creating both student and faculty/staff portals to present information such as University calendars and academic deadlines that is now sent via email. Portals could also include information about routing email off campus (#7), other email clients (#9) and using encryption and digital signatures (#12).
14. Provide more education about the proper and effective use of electronic communications.
 - Offer education about the proper use of electronic communications, particularly in the areas of e-risks, e-etiquette, and use of personal web space.
 - Offer education about the effective use of electronic communications particularly in the areas of searching/managing email, accessing email off-line from various clients, setting up spam filters, and using mobile devices.
 - Consider using the on-line course *Online@Iowa* for help in educating students about shaping their on-line image.

Alignment with the Top Ten Themes and Survey Results

[The parenthetical number in the bulleted statements below refers to the numbered recommendations above.]

In spring 2005 ITS conducted a student survey, results of which showed that students want more storage space (quota), better spam and virus protection, ability to send and receive large files, and email without commercial ads. These requirements are addressed above by recommendations #4 (raise quota), #14 (education about virus protection), #6 (reduce the amount of spam), #4 and 11 (propose and support methods of moving and sharing large files), and #1 (continue to support the Blue Cluster and the Exchange services).

In fall 2005 the core team held interviews, focus groups, open forums, and surveys from which the Top Ten Themes listed below were developed.

1. Email has become the most important means of electronic communications, even more important than the desk phone.

- Investing in the existing email services directly addresses this theme. (#1)
- Providing more education improves the effectiveness of electronic communications. (#14)

2. People want to easily send, receive, share, and save large files and need robust tools for managing those files.

- Raising the student disk quotas from 5 MB to 50 MB and raising faculty & staff disk quotas to 250 MB will bring Central IT systems into parity with educational peers' mail quotas. (#4)
- Improving the quota processing on the Blue Cluster would help users better manage their email. (#5)
- Aligning message size (#10) and supporting ways of moving large files (#11) respond to this theme.

3. Members of the campus community want less spam.

- Reducing the amount of spam directly addresses this issue. (#6)
- Providing training and education on how to create spam filters using the most popular email clients will help eliminate some of the direct spam received. (#14)
- Providing education on how to publish email addresses on web pages will minimize the harvesting of the addresses by spammers. (#14)
- Portals, blogs, and RSS feeds could be used to post University information rather than emailing the unsolicited University information. In the fall 2005 survey students rated a portal highest on the desirable list as a way of receiving all sorts of University information and schedules. (#13)

4. Some people want additional security, and some indicate problems with existing security practices.

- The current practice of blocking viruses at the email gateway has been effective and should continue to be effective. More education about how viruses are transmitted and how to keep up-to-date with current virus information is needed. (#14)
- Survey results and focus groups show high interest in using digital signatures and encrypting and decrypting email. ITS should study how to allow valid encrypted email attachments. (#12)

5. The campus community has strong and varied opinions about calendaring. Some view group calendaring as critical, some see little need for it, and some are opposed to it.

- Allowing entire units to move to Exchange will serve those who want group calendaring. The surveys showed that students would like to schedule meetings with faculty and staff, but the faculty/staff surveys show equally strong sentiment in not wanting such student access. (#1, #3)
- Many students would like to have course schedules on-line, something that may be possible using the existing course management system. (#13)

6. *People want fast and responsive access to their email system from wherever they read mail.*

- Enhancing the Blue Cluster and Exchange addresses this theme. (#1, #2)
- Implementing infrastructure that allows faculty, staff, and students to easily send email using their desktop email client (Eudora, Netscape, Outlook, etc.) will enhance off campus access using a known or preferred email client. (#8)

7. *The standard University email address (firstname-lastname@uiowa.edu) is important. Most people agree that off-campus routing is necessary.*

- This theme has been addressed via recommendation #7, policy recommendations, and education. (See Appendix B.)

8. *Many members of the campus community prefer freedom of choice in selecting their personal computers and the applications that run on them.*

- Retaining our existing two email services maintains their current ability to choose. (#1)

9. *Some welcome advanced electronic communications, but others are less tolerant or desiring of it.*

- As in theme 8 above, the decision to retain and enhance existing services allows people to use or not use the electronic communications available. (#1)

10. *There is a need for education about the proper and effective use of electronic communications.*

- This theme is directly addressed by recommendation #14: Provide more education about the proper and effective use of electronic communications.
- Publicizing desktop client availability both on and off campus addresses the need for education. (#9)

Survey Results Not Addressed in the Recommendations

Instant Messaging

More than half of the students were interested in using University-provided instant messaging (IM) to talk to support staff, other students, and faculty/staff. Faculty/staff would use IM to talk to support staff and other faculty/staff. During interviews the core team heard several times that the University should not spend its time and money trying to provide the most recent communications technologies that are available commercially. Thus, we recommend no action.

Large Electronic Mail Lists

Faculty and staff agree that large electronic mailing lists or newsgroups are important; they can use the provided Listserv software for lists. Email lists rated high on the student surveys. We recommend considering making such a facility available to students or educating them about what is available in current email programs.

Message Recall

Responses from both surveys shows high interest in message recall. This feature is not available in all email systems, and it works only partially in Exchange, where it is available. Thus, we recommend no action.

Voice Mail and Email Integration

Faculty and staff surveyed responded with lots of interest in having voice mail from the office phone delivered to the email account. We recommend further research on this.

Student Web Pages

The student survey showed significant interest in having personal web pages; thus, students need to be informed about using MyWeb to store personal web pages.

Email Policies and Services at Other Universities

The Electronic Communications Core Team reviewed the email policies and service offerings at other Universities.

Policies

Most Universities use email as an official means of communications with students. Most Universities allow students to route their email off-campus. For email policies at other universities, see <http://www.uiowa.edu/ecomunications/policies-other.html>

Message (Attachment) Size

The Educause 2004 Campus Computing Survey revealed that the average message size was 26 MB for public universities and 21 MB for public 4-year colleges.

Quota Size

An informal email quota survey by Educause revealed that the average quota size for faculty/staff was about 200 MB and 50 MB for students.

Service Offerings

Several peer institutions also support Exchange for administrative needs (e.g., calendar) and Unix-based email for students and faculty/staff who do not need or want an electronic calendar. For email services at other universities, see <https://myteam.uiowa.edu/sites/cs/sp/public/emailservices-other.pdf>

Electronic Communications Core Team

- Lance Bolton, ITS-Campus Services
- Diana Harris, Engineering IT
- Rex Pruess, ITS-Systems & Platforms
- William Scheidecker, Student
- JJ Urich, Computer Science IT
- Joel Wilcox, Office of the Provost
- Mark Young, Faculty

Appendix A – Implications of Recommendations

The recommended capital investments will be to acquire additional Intel servers and SAN storage. Both the Intel servers and the SAN storage can easily be repurposed for other services if, in the future, they are not needed in support of email.

Due to the constraints of the existing file system on the Blue Cluster, it will be necessary to migrate from the AIX operating system to Linux and to replace the Network File System (NFS) with a new file system, such as the Polyserve file system.

Authenticated SMTP will be required to enable faculty, staff, and students to easily send email from off campus using their preferred on campus email client (Eudora, Netscape, Outlook, etc.)

Raising the email message size limit will allow larger messages to be sent around campus. However, email is not the optimal transport mechanism for transferring large files as email was not designed for that purpose. To protect the integrity of email flow, email gateways are configured to reject large messages. Message size varies from department to department and from campus to campus, making it difficult to know what size file can be transferred from one site to another. Alternate solutions for transferring large files are available and should be promoted.

Appendix B – Policy

The Committee interpreted its mandate as including the formulation of a policy statement about email as an official method of communication between the University and its students. There was agreement that any policy on email should provide the following information:

- Email is an official means of communication with students
- While email forwarding of the *uiowa.edu* account is allowed, it entails risk to students and does not excuse them from the consequences of missing essential information coming from the University through email

After discussion with officials in the registrar and provost offices and the initial draft of such a policy, the Committee discovered that a policy was extant and already included in “Policies & Regulations Affecting Students,” a regulatory document maintained by the Office of the Dean of Student Services. The Committee was welcomed to suggest further refinements to that policy, and the following text was proposed:

Email Address Policy in “Policies & Regulations Affecting Students”

September 23, 2005

With regard to electronic addresses, official correspondence from the University is regularly sent to students by electronic mail. Students are required to know the information contained in official University email messages sent to the student's official email address and to keep their accounts maintained so that all official University email is deliverable. All students will be assigned an official University email alias (firstname-lastname@uiowa.edu), hereafter referred to as the official University email address, and provided a University of Iowa target email account. All official University email should be sent to this official University email address. Every student should create an email account with the University of Iowa through ISIS at <http://isis.uiowa.edu> by clicking on "My UIowa," then "My Email," and "Request Email Account.”

While it is not recommended, a student may change the routing address (i.e., have email which is addressed to his or her official University email address routed to an account like Gmail or Yahoo) through ISIS by clicking on "My UIowa," then "My Email," and "Update Email Routing Address." Students who choose to route email to another email address do so at their own risk and are responsible for all information, including attachments, sent to any other email account. The University is not responsible for email routed to any other email address or for any difficulties that may occur in the proper or timely transmission or access of email routed to any unofficial email address. A student's failure to receive or read in a timely manner official University communications sent to the student's official email address does not absolve the student from knowing and complying with the content of the official communication. In addition, faculty may legitimately assume that a student's official University email address, as available on class rosters, is a valid mechanism for communicating with a student and may use email for communicating with students registered in their classes.

Students are expected to comply with all of the University's information technology policies, available at <http://cio.uiowa.edu/Policy/>

Appendix C – Gartner Article

"Universities Face Challenges in Modernizing E-Mail Systems"; August 15, 2005; ID number G00129691.
<https://myteam.uiowa.edu/sites/cs/sp/public/gartner.pdf>

Note: The article is available to all University of Iowa faculty, staff, and students and other subscribers of Gartner service.

The final recommendation from that article states:

"Gartner believes that, for many universities, the best solution will be to gradually replace components and, if performance is still inadequate, to migrate to a commercial, standards-based solution designed for ISP environments."

The electronic communications recommendations above align with this Gartner recommendation.