

December 11, 2013

MEMORANDUM

TO: Dr. Karan L. Watson
Provost & Executive Vice President for Academic Affairs

FROM: Pierce E. Cantrell, Chair
Email Selection Advisory Committee



SUBJECT: Email Consolidation Recommendations

The Email Selection Advisory Committee was charged with reviewing options for migrating to a cloud-based email system and recommending the transition path for faculty, staff, and student email. The committee submits the following recommendations:

- Provide Google Apps for Education to students, retirees, interested faculty, and on-premise, centrally hosted Microsoft Exchange for faculty and staff on Computing and Information Services' (CIS) high-availability Exchange infrastructure.
 - Nine of 13 committee members voted for this option. Three members voted for Google Apps for all populations; one member voted for Office 365 for all populations.
 - The committee seeks guidance on whether Google Apps email accounts should be provided for former students. Many universities have chosen this approach. Since the Association of Former Students also uses Gmail, we could move students to @AggieNetwork.com when they graduate.
- Fund these services centrally. Estimated costs for these services include \$9,900 in one-time startup expenses and \$339,831 in annual expenditures.
 - Central funding would provide two-gigabyte (GB) Microsoft Exchange mailboxes for faculty and staff. Additional mailbox storage would be available for \$2.30/year/GB.
 - The committee requests your guidance regarding funding for Texas A&M at Galveston, Texas A&M School of Law, and Texas A&M Health Science Center. These units either pay for email services or provide it themselves, and they do not contribute to the University Advancement Fee funding. The cost per MS Exchange mailbox is \$2.15/month/mailbox.
- Allow faculty to request a Google Apps account for collaboration with students and colleagues in addition to receiving an Exchange account.
- Allow deans and vice presidents the option to select Google Apps for their units, or to delegate this decision to the department level. If an entire unit moves to Google Apps, we recommend they not receive Microsoft Exchange accounts.

- Review Microsoft Office 365 in a year to judge the stability of the cloud service.
 - A large Texas public university's implementation problems were a factor in not selecting Office 365 for faculty and staff.
 - If Office 365 is judged to be stable after a sizeable pilot test, offer the option to deans and vice presidents to move from on-campus Microsoft Exchange to the cloud service.

Background

The Deloitte Comprehensive IT Assessment [1] recommended moving email services to cloud computing providers to reduce costs, improve quality, and meet growing demands. Also, the Texas A&M Student Senate passed a bill to recommend moving the students to Google Apps [2].

The Information Technology Advisory Committee (ITAC) reviewed cloud-based email providers, Google Apps for Education, and Microsoft Office 365 [3]. ITAC recommended Google Apps for Education for all audiences. ITAC considered Google Apps the better solution due to lower cost and higher reliability. It provided superior collaboration tools and offered a simpler integration path with existing university email services. In addition, ITAC recommended the university continue to run a centrally hosted Exchange service for email accounts that cannot be provisioned in the cloud for legal or security reasons.

To aid the selection process, CIS completed technical analyses on implementing these cloud-based services [4,5] and providing on-campus, hosted Exchange for all faculty and staff [6]. CIS presented preliminary cost estimates for various email options [7]. CIS believed implementing Office 365 had some uncertainty, which could be better understood after performing an engineering study with Microsoft. Implementing Google Apps was much more straightforward. However, some Google Apps services, such as Groups, Sites and resource accounts, may pose governance, administration, or communication issues.

Implementing an on-premise hosted Exchange would entail expanding the existing CIS service to support a larger user base.

Networking and Information Security prepared an accessibility report [8] on the cloud services. While Gmail and Google Calendar are accessible, other Google Apps applications have accessibility issues. Other universities that have adopted these products have provided alternative services or placed restrictions on use to accommodate users with disabilities. Office 365 also presents challenges for the disabled user, but there is the option to use Microsoft desktop software instead of the web interface.

The Email Selection Advisory Committee reviewed these documents, attended demonstrations, and discussed key issues. Some factors considered included cost, impact to users, data storage outside the U.S., data encryption, and deletion policy [9].

Rationale for Email Committee's Recommendations

While the Student Senate and ITAC endorsed a single cloud solution, Google Apps, the committee recommends a dual solution with Google Apps for students, retirees, and interested faculty, and on-premise Exchange for faculty and staff.

- Current users of Microsoft Exchange, which represents a majority of faculty and staff at Texas A&M, could be negatively impacted by moving to Google Apps. Although users could continue to use Microsoft Outlook to access email, calendar and tasks, some important Outlook features would not be easily supported, such as access to shared accounts, or users would have to log-in to the Google Apps web interface to obtain a similar function.
- The committee weighed the advantages of a single cloud solution, such as a common calendar, but deemed moving the entire university to be too risky.
- An on-premise Exchange service would need to be provided for legal or security edge cases, even if Google Apps were the single email solution.
- Because Google Apps provides superior collaboration tools, faculty should be allowed to request a Google Apps account, and units would be allowed to opt for Google instead of on-premise Exchange.
- The recommended solution is the cheapest option of the five the committee considered.
- Current Office 365 operational problems were judged too risky at this time.
- Some committee members were concerned that Google stores its data outside the U.S., and that both vendors currently do not encrypt data transmitted between data centers or data at rest (i.e., while stored on a disk drive in one of their data centers). For those individuals, having the on-premise Microsoft Exchange system was seen as being more secure.
 - Both Google and Microsoft have announced their intention to encrypt all communication links between their data centers, to encrypt the data while it is at rest, and to encrypt data in transmission between the user and the vendor. Microsoft has said this will be complete by the end of 2014. Google is close to having data center links encrypted, and they are also working on encrypting data at rest.

Next Steps

- The committee is charged with determining a governance structure to address usage and policy questions.
- CIS will appoint a project manager for the implementation.
- CIS will recommend a timeline for the migration and submit it to the committee for approval.

Attachments – Email Committee Document Portfolio

- [1] *Deloitte Phase 1 Memo and Cloud Hosted Email Solution*
- [2] *Go Google Bill*
- [3] *ITAC Email Recommendation*
- [4] *Google Apps Summary*
- [5] *Microsoft Office 365 Summary*
- [6] *On-Premise Hosted Exchange Summary*
- [7] *Email Consolidation Paths and Potential Costs*
- [8] *Google Apps and Microsoft Office 365 Accessibility Report*
- [9] *Key Considerations Ranking*

cc: **Email Selection Advisory Committee Members**