

Moving your university to the cloud – and bringing faculty with you

Table of Contents

Overview.....2
Why Google Apps for Education?.....2
Reduction in IT costs.....2
Reduction in IT complexity.....3
Improved learning opportunities & outcomes...3
Better functionality with more features.....4
Frequently Asked Questions.....4



Moving your university to the cloud – and bringing faculty with you

Overview

On college campuses everywhere, the pressure for IT to provide tools and services that help users work, while keeping costs down, continues to rise. The growing need to integrate technology in the classroom, especially under budget pressure, has made the use of web-based programs – or “cloud computing” – increasingly popular. More and more, universities are moving services like email, calendaring, and document creation and sharing to the cloud, allowing them to focus valuable resources toward more strategic initiatives for their campus communities.

But the cloud isn't only about cost reduction and resource efficiency. It's about facilitating improved communication and collaboration between students and teachers, and amongst staff. Using web-based solutions like Google Apps for Education to enhance the teaching process can shorten what once might have taken days into minutes, and add the value of helping educators connect more effectively with students and others in their academic networks.

Cloud computing has already caught on with students. Today, 80% of universities outsource student email¹, but a larger trend is becoming clear: as universities move to the cloud, they're bringing faculty and staff with them. In fact, this same report reveals that 29% of universities are considering converting to outsourced or hosted applications for staff and faculty, up from 18%² in 2008.

While cloud computing has already become the new standard for students, faculty and staff face a unique set of questions as they consider the cloud. In this paper we will discuss how Google Apps for Education addresses these questions, and the most common concerns schools have about adopting cloud-based solutions for a non-student audience.

Why Google Apps for Education?

Outsourcing campus IT offers proven benefits: cost savings, increased user satisfaction, accessibility, interoperability, and reduced complexity. The move to outsourced solutions has already brought today's web-savvy students to the cloud. Today, 80% of campuses use outsourced email solutions for students – and, of those, 60% have chosen Google Apps for Education¹. Students who already use Gmail, Google Docs, and Google Calendar in their personal lives expect that same convenience and ease in their on-campus solution.

With their use of the cloud, students are ushering in a new age of innovation and a new trend is emerging: the rest of campus is catching on. Cloud tools offer even more powerful benefits when extended to the entire campus community – and faculty and staff are the next wave in this movement. The benefits of moving to Google Apps for faculty and staff include:

Reduction in IT costs

Universities – like any other enterprise – must continually balance ever-growing priorities and goals with their often-challenging budget realities. Budget alone

¹ Campus Computing, 2009

² Campus Computing, 2008

*"Apps let us quit babysitting onsite email systems and do something productive."
—James Ketterer, Director of Networking and Tech Services DePauw University*

is a reason to make the move to Google Apps. Brown University predicts that by moving their staff and faculty email services to Google Apps – already used by their student body – they will save around \$1 million per year.

After Boise State University migrated their 2,400 faculty and staff over to Google Apps, they delivered new collaborative abilities between students and staff, and reduced IT infrastructure, support, and maintenance by \$147,000 annually (not including savings for staff redirection). University of West Florida estimates that they save around \$600,000 each year by avoiding costs and licensing fees associated with running an in-house email system. Italy's Università di Pavia estimates savings of around €100,000 each year.

Reduction in IT complexity

Aside from cost, bringing all groups on campus into the same computing environment simplifies the work of IT staff – especially when that environment alleviates the need for on-premise servers and the rooms, routing, and other systems needed to support them. Wesleyan College reports that moving to Google Apps has alleviated the burden on IT to perform upgrades and backups, while delivering an always-current solution.

Mary Baldwin College found that migrating to Google Apps for faculty and staff made their email more reliable and made calls to the Help Desk virtually non-existent. With this significant workload alleviated, their team now has the freedom to work on other initiatives and projects.

Moving entire campus communities to Google Apps has minimized the time that Macalester College has to spend managing a commodity service like email, freeing them to focus on other efforts closer to their core mission. With students, faculty, and staff on Google Apps, they no longer face the complexity of managing multiple systems.

Moving to Google Apps across campus enables schools to direct valuable IT resources – both people and funds – toward more strategic initiatives. Schools with numerous and disjointed email environments face the inefficiencies of duplication and non-integration – not to mention costs. After migrating their faculty and staff to Google Apps, Boise State University was able to reallocate 1.5 full-time employees to critical projects like streamlining the number of operating systems supported on campus, helping to save costs and simplify their overall IT operations. At Abilene Christian University, consolidating users onto one system let them stop spending all their time running services, and instead focus on using technology for strategic reasons.

Improved learning opportunities and outcomes

Communication and collaboration between students and their professors, and from faculty to administration, works best when all parties have access to the same tools and aren't limited by where or when they work. Google Apps facilitates that collaboration by making information securely available anytime, anyplace, and on any device with access to a browser.

Once Brown University moved students to Apps, faculty and staff asked for it, too – and they've now found that providing this uniform system lets everyone work together, making faculty, employees, and students more efficient. At Temple University, faculty saw the benefits students gained by using Apps, and urged administration to bring them on. Today, more than 90% of faculty choose Apps over their in-house system. Allegheny University reports that their only challenge is just figuring out the limitless collaborative possibilities that Apps allows, getting people to work together in totally new ways.

“Around 80% of faculty moved immediately to Gmail and left behind their other email clients. For those who didn’t make the switch, nothing had to change for them since we installed Google Apps Sync for Outlook, providing the option of a system they were already comfortable with.”

—Dave Koontz, Associate Director of IT
Mary Baldwin

“Apps has provided upgraded services in terms of availability, resources, and security, and has fostered a platform for next-generation collaboration and mobile utility.”

—Geissler Golding, Infrastructure Services and Security Manager at University of West Florida

With everyone on the same system, students and professors can take advantage of features like forms in Google Docs, collecting data or creating real-time quizzes. They can benefit from the power real-time collaboration and chat in Google Docs, minimizing back-and-forth during the editing process, clarifying comments, or engaging students in team projects. Sharing calendar information can enable professors to easily post test dates, office hours, and assignment details with their class; and creating and publishing a Google Site can help professors centralize course information including reading assignments, rubrics, study guides, and more. When students and faculty use these tools together, the possibilities are endless – and wins like better participation and improved performance can result from this improved student engagement.

Better functionality with more features

Google Apps for Education provides first-class features and capabilities, helping to ensure that students, staff, and faculty have the tools they need, including:

- Communication: Gmail, Google Calendar, with integrated voice and video chat
- Collaboration: word processing, spreadsheets, presentations, and web publishing with Google Docs and Google Sites
- Built-in Spam and virus protection
- Access from anywhere and interoperability across platforms and devices
- Ample storage space
- Disaster recovery
- Mail and Calendar delegation
- SSL encryption

At The School of Oriental and African Studies, a survey taken six months after migration to Gmail showed faculty satisfaction scores at 90% for Gmail and 93% for Google Calendar.

The University of West Florida reports using Google Sites for sharing projects across campus; Google Docs has enabled real-time collaboration wherever students and faculty work.

Temple University faculty have leveraged Google Sites, included in Google Apps, to have students in their Education department create “Teacher” websites for their mock K-12 classrooms. Their Disability Resources & Services staff use built-in chat to communicate with deaf/hearing-impaired students. Northeastern State University says that having staff and faculty easily access Apps from anywhere lets them work with more freedom and productivity. Similarly, Columbus State has integrated with their Student Information System to create groups and sites for each class, delivering collaborative online workspaces for students and faculty. Bob Diveley, Executive Director of Operations, says that these tools have greatly enhanced a more active learning environment for students and faculty alike.

With benefits like these, there are still some unique issues and hesitations to evaluate when moving faculty and staff over to Google Apps. Following are some of the common questions schools consider when evaluating the cloud, and answers on how Google Apps can answer them.

Frequently Asked Questions

Following are some common questions and answers about the use of Google Apps for Education.

Is data really safe, secure, and private in the cloud?

Google Apps provides a secure, reliable platform for your data, combining advanced technology with industry-leading practices for data center

management, network application security, and data integrity. When you entrust your school's information to Google, you can do so with confidence knowing that the full weight of Google's technology and infrastructure investment is used to ensure the security, privacy, and integrity of your data. Google Apps benefits from extensive operational experience in producing secure and reliable products. We invest heavily and continually in maintaining the most secure and reliable environment for data and applications. Google Apps has received SSAE 16 Type II attestation, guarantees a 99.9% uptime SLA, and is FERPA compliant.

As Jerry Hinkle, Temple University's Executive Director of Computing Services sees it, "Some employees initially expressed concern over privacy and security issues. But the Information Security team was very impressed with the security features. The Law Faculty had privacy-related concerns until the user agreement was shared with them before deploying. Now the majority of the Law Faculty has chosen to go with Google as opposed to other solutions."

At Columbus State, faculty and staff initially expressed privacy concerns when migrating to Google Apps. To address any hesitation, they brought members together in focus meetings addressing concerns by demoing a test domain showing how features actually worked. Hands-on training at Brown University helped faculty and staff better understand Google Apps' functionalities, making them comfortable with how privacy and security were actually handled by their University and by Google.

More information about Google's security practices and privacy policies can be found at any of these sources:

- Security and Privacy FAQ (<http://goo.gl/2cmK>)
- Google Apps Privacy Policy (<http://www.google.com/intl/en/privacypolicy.html>)
- Security Whitepaper (<http://goo.gl/5D81>)

Is Google Apps free for faculty and staff as well as for students?

Yes, with no ads for any of your users – students, faculty, or staff.

Who owns our school's data?

Your content belongs to your school, or the individual users at your school and the Google Apps Terms of Service contractually ensures that your institution (or students, faculty, and staff) is the sole owner of this data. As owners of this data, we believe it should be easy for users to move it in and out of our systems. Furthermore, the Privacy Policy explicitly guarantees that we will not inappropriately share or use personal information within Google Apps.

Where is our data hosted?

Google manages your data to ensure data privacy and security and also to provide optimal performance and data resiliency. Your data will be stored in Google's network of data centers, which is one of the most robust networks of distributed datacenters in the world. For speed and performance's sake, we try to keep data as close to you as possible, but due to the multi-tenant architecture of our system, we are unable to guarantee that data will remain solely in the United States.

Since Google is a U.S. company, we comply with all applicable U.S. laws and do not maintain data centers in countries where we are prohibited from doing business. Ultimately, we believe that this structure is important for two reasons.

First, it allows us to better secure your data by dividing any given file or piece of information (e.g., email, document, calendar entry, etc.) into tiny chunks (a few bytes in size) and distributing those bytes across numerous servers. To better

visualize this process, think of a paper shredder. Google's distributed data approach is like putting your information through a paper shredder and making confetti, then scattering the pieces.

Secondly, this structure is critical for our redundancy and backup efforts. This multi-tenant environment is one of the reasons that we can guarantee our 99.9% uptime SLA.

The locations of our geographically distributed data centers are kept highly confidential for security purposes, and access to these data centers is very limited to only authorized select Google employees and personnel. The protection of intellectual property on these servers is critically important to us – in fact; employees at Google, Inc. rely upon the same Apps production environment used by our education customers. To reduce exploit risks, each Google server is custom-built with only the necessary software components and the homogeneous server architecture enables rapid updates and configuration changes across the entire network when necessary. Data is replicated in multiple data centers for redundancy and consistency availability. To read more about how we store data, you can read more about the Google File System at <http://labs.google.com/papers/gfs.html>

What kinds of accreditation does Google Apps have and does it have all those acronyms (like SSAE 16, FERPA, and HIPAA) covered?

ISO 27001: We have earned ISO 27001 certification – one of the most widely recognized, internationally accepted independent security standards – for the systems, technology, processes and data centers serving Google Apps.

SSAE 16 Type II: Google Apps has received a satisfactory SSAE 16 Type II audit, meaning that an independent auditor has examined the controls, processes, and policies protecting the data in Google Apps (including logical security, privacy, Data Center security, etc) and provided reasonable assurance that these controls are in place and operating effectively. We will continue to seek similar attestation in the future.

FERPA: Since Google is a U.S. company, we comply with all U.S. laws, and the Google Apps Terms of Service can specifically detail our obligations and compliance with FERPA (Family Educational Rights and Privacy Act) regulations. To the extent that Google has access to "Education Records," it is deemed a "school official," as each of these terms are defined under FERPA, under this Agreement and will comply with its obligations under FERPA.

HIPAA: Individual schools make their own assessments about whether they are able to comply with HIPAA standards while using Google Apps. This could include educating users on the type of data that should and shouldn't be sent via email to stay in compliance. Research institutions as well as medical centers like St. Louis University are using Apps for medical and hospital personal, abiding by HIPAA regulations.

U.S. Safe Harbor: Google is registered with the U.S.-EU Safe Harbor Agreement, which helps ensure that our data protection compliance meets European Union standards for educational institutions.

Are there open integration options to work with our existing systems?

Google Apps for Education supports open industry standards, meaning it's easy to integrate into your existing IT systems. We are built on an open platform, so allow for robust LMS integration with systems like Blackboard, Moodle, Sakai etc. Our rich APIs feature single sign-on, user provisioning and management, email migration, email routing controls and reporting including:

- SAML-based Single Sign On
- Configurable mail routing options through Google Apps mail servers or an existing Email Gateway
- Integration with Active Directory/LDAP/Directory Information Services eases account management and provisioning using our APIs and directory sync tool, Google Apps Directory Sync
- Google Sync to automatically sync mail, calendars, and contacts for BlackBerry, iPhone, Android phones, and more
- Migration Tools and APIs for streamlined server and client side data migration, including Microsoft® and Lotus tools to migrate contacts and calendars

You can learn more about these and other available APIs at www.google.com/a/help/intl/en/edu/infrastructure.html

Will Google share, read, or scan our data?

Google does not share personal information with advertisers or other third parties without your consent. Since Google Apps for Education is completely ad-free, your school's content isn't processed by Google's advertising systems. Automated content scanning (with no human involvement) makes Apps work better for users by providing spam-filtering, anti-virus protection and malware detection; and also enables unique functionality like powerful search in Gmail and Google Docs. Google employees will only access content you store on Apps when an administrator from your domain grants Google employees explicit permission to do so for troubleshooting. Google complies with valid legal process. It is Google's policy to notify users before turning over their data whenever possible and legally permissible.

Can we use our own authentication system to provide access to Apps?

Google Apps integrates with standard web single sign-on systems using the SAML 2.0 standard. Organizations can do the integration themselves, or work with a Google partner to accomplish this.

What if we want additional safeguards for our faculty and staff?

As an add-on to Google Apps, Postini services can help your school further safeguard information and meet security and compliance requirements. Message security tools enable your administrators to create a variety of policies and filters for your school's email (beyond the strong spam and virus filtering in Gmail), while mail archiving and discovery tools allow schools to retain emails in a centralized, searchable repository for up to 10 years. You can also encrypt messages and create content based policies using Google Message Encryption to help comply with HIPAA and data privacy regulations. For more information about these and other Postini services, visit <http://www.google.com/postini>. Aside from Postini, you can also integrate with other third party solutions of your choice.

Are other schools using Apps for their staff and faculty?

More and more schools across the globe are adopting Apps everyday, but here are just a few of the schools already using Apps for their faculty and staff:

Brown University, University of Minnesota, Boise State University, Temple University, St. Louis University (including 8,500 staff from their Medical Center and Hospital), Case Western University, Wesleyan College, CSU East Bay, University of San Francisco, University of Maine System, CSU Monterey Bay, University of West Florida, University of Delaware, Idaho State University, University of North Carolina at Greensboro, Columbus State University, Mary Baldwin, Abilene Christian University, Manhattan College, Macalaster College, DePauw, Allegheny, RISD, UMN, Oxford Brookes, Macquarie, SOAS, Università di Pavia, Azusa Pacific University, Wake Forest, San Jose State, Haverford

About Google Apps for Education

Google Apps for Education is a free suite of hosted communication and collaboration applications designed for schools and universities. Google Apps includes Gmail (webmail services), Google Calendar (shared calendaring), Google Docs (online document, spreadsheet, presentation, and form creation and sharing) Google Video (secure and private video sharing – 10GB free) and Google Sites (team website creation with videos, images, gadgets and documents integration), as well as administrative tools, customer support, and access to APIs to integrate Google Apps with existing IT systems.

For more information, visit
www.google.com/a/edu

College, Barnard College, Austin Community College, Hofstra University, George Washington University, Colby College, ESSEC Business School, University of Sheffield, University of Pavia, and Loughborough.

Faculty and staff who haven't grown up immersed with this technology may not be as comfortable with this kind of change as students have proven to be. As is the case with any paradigm shift, Google Apps – and cloud computing more generally – represents a new way of doing things, which may initially invoke some hesitation and frustration from some groups on campus. Communicating these policies and practices to facilitate an open and transparent dialogue about the migration will help everyone to better understand the risks and imagine the rewards.

