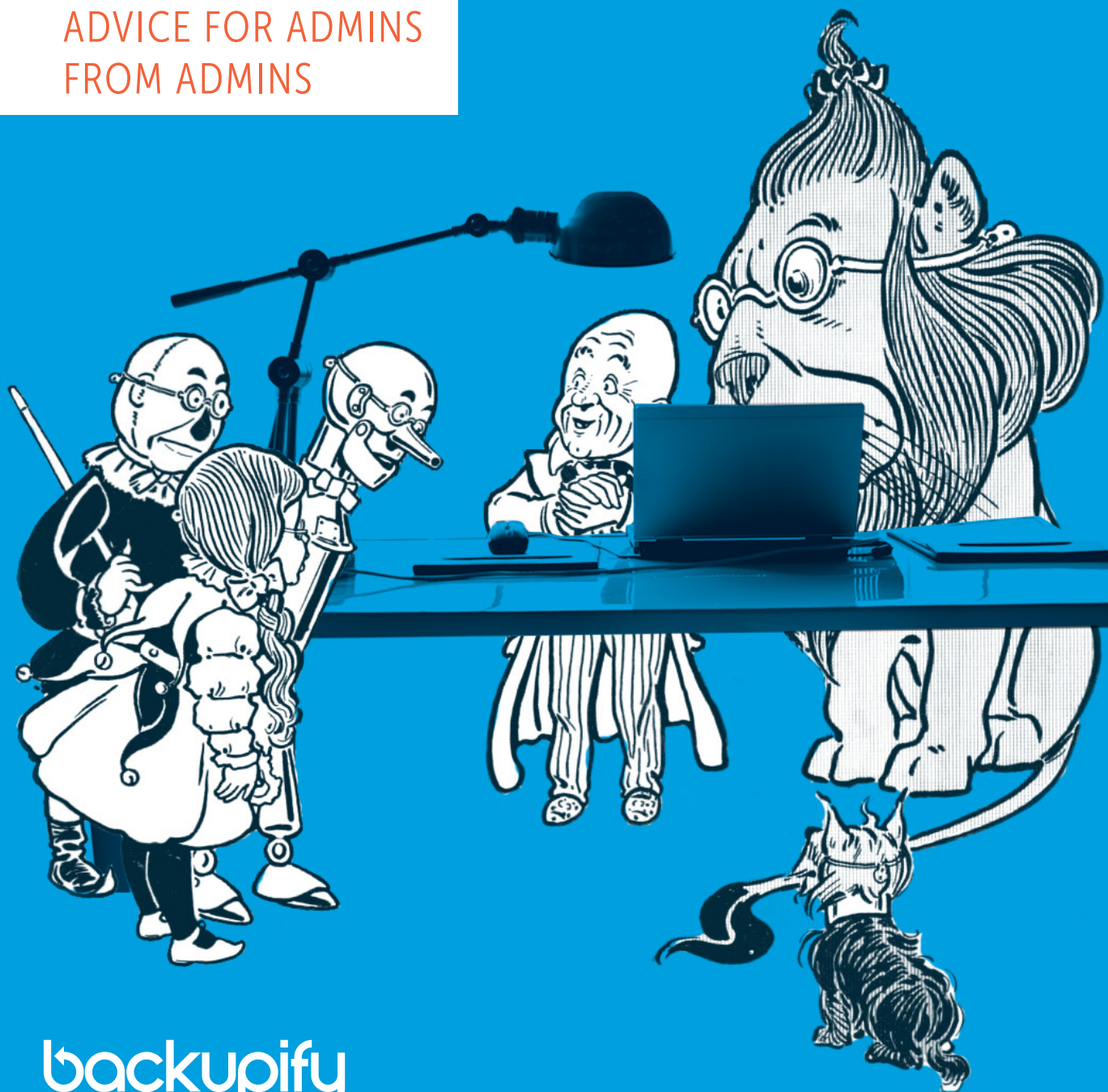


The WIZARDS

behind Google Apps

ADVICE FOR ADMINS
FROM ADMINS



backupify



Pay no attention to that man – or woman – behind the curtain!

Actually, that's not true. When it comes to those dedicated IT professionals who are "behind the curtain," you **should** pay attention. They are, in fact, crucial not only to the IT operation in general, but to the successful management of Google Apps in particular. These are the folks who ensure that Google Apps is properly set up and maintained so that it's always available for everyone that relies on it.

Ignore them at your own peril.

We won't make that mistake. Even better, we'll make sure **you** don't make that mistake. Google Apps is a dynamic collaboration platform that enables people to communicate better and be more productive. But it doesn't happen by wizardry. It just appears that way.

We've assembled a panel of experienced IT managers who are responsible for keeping Google Apps running in their organizations. We temporarily stopped them from pulling their levers and punching their buttons so they could share their collective wisdom with you. The goal is to help you with your jobs when you have to step back behind your curtain.

We suggest you pay **close** attention.

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We're not in Kansas anymore



Just like Dorothy and Toto on first landing in Oz, we users can sometimes be awed by the array of technology that has engulfed us. Instead of talking flowers, good witches in balloons, or small people with lollipops, it's the lightning like advances in technology tools that has us mesmerized.

Just when we think we have Office mastered for example, along comes a shiny new tool for us to learn to use. The shiniest of all right now is the cloud - not a tool at all but a revolutionary way of managing IT infrastructure. We may not be well versed in the nuances of the cloud platform because most of us are just...users. We store files in Dropbox and sync our Apple devices on iCloud, but we're not bothered by the details.

That's *your* job.

There's little doubt that the cloud has dramatically changed the way you manage your IT landscape. Probably the biggest game-changer of all is Google Apps. Beginning with Gmail in early 2006, Google Apps has grown to provide nearly any business, educational, or personal application you might need.

"Coming from a 'static' Microsoft environment, the pace of change has been amazing," says Justin Gale, Google Apps Certified Administrator and IT Strategist. "Yet generally delivered in such small doses so as to not usually overwhelm the user community. The Google Apps of today is so much more integrated and feature-rich compared to where it started, yet we haven't had to deploy anything!"

"It's an incredible tool for collaboration within a company, easy to use, with rapid payback and provides huge benefits by concentrating on *information* rather than on *tools*," says Benoit Flama, Group Google Apps Manager for a multi-billion dollar international automotive company.

"As someone who was initially skeptical of cloud services, I've been hugely impressed with Google Apps," adds Karl Rivers, Network Manager for Biddenham International School in Biddenham, UK and founder of [ClassThink.com](#). "From a management perspective, not having to run an internal exchange server means I can focus my limited resources on priorities that make a difference. Managing user accounts and controlling access to specific applications is simple and a lot of thought has gone into developing the types of features that are important to administrators."

The financial benefits are also attractive to managers struggling to do more with less. According to a [Forrester report on the economic impact of Google Apps](#), payback from implementation was 1.4 months with an ROI of 329% thanks to cost savings on licenses and infrastructure and reduced spending on administrator time devoted to systems maintenance, upkeep, patching, and upgrades. The report showed that organizations adopting Google Apps reduced the number of FTE's throughout their IT group: those needed to manage patches and upgrades fell by 39%, security by 29%, archiving by 27%, backup and disaster recovery by 34%, vendors by 42%, and internal sites by 22%.

"With a stable platform and rapid evolution cycle, Google Apps will continue to convince organizations to move away from thick clients to the cloud," says Kevin A. McGrail, Google Subject Matter Expert and computer consultant at [PCCC.com](#). "When coupled with hardware and software like Glass, Android, and Chromebook platforms, we are really at the infancy of how people will use, access, and create content. I'd hate to be an established competitor in Google's crosshairs because they continue to do things better and cheaper than most anyone."

"It's amazing to see a company like Google that has the ideas, the engineers, and the wherewithal to bring moon shots to fruition. I look forward to the ride!"

– Kevin McGrail, Google Subject Matter Expert and computer consultant at [PCCC.com](#).

Follow the Yellow Brick Road

As the Good Witch said, it's always best to start at the beginning and that's perfect advice. As you probably already know, getting started with Google Apps is simple. Appropriately enough, you begin with the [Google Setup Wizard](#). That will take you through the basics so we won't bore you with the details here. Instead, we'll focus on other issues you might face at some point during the setup phase.

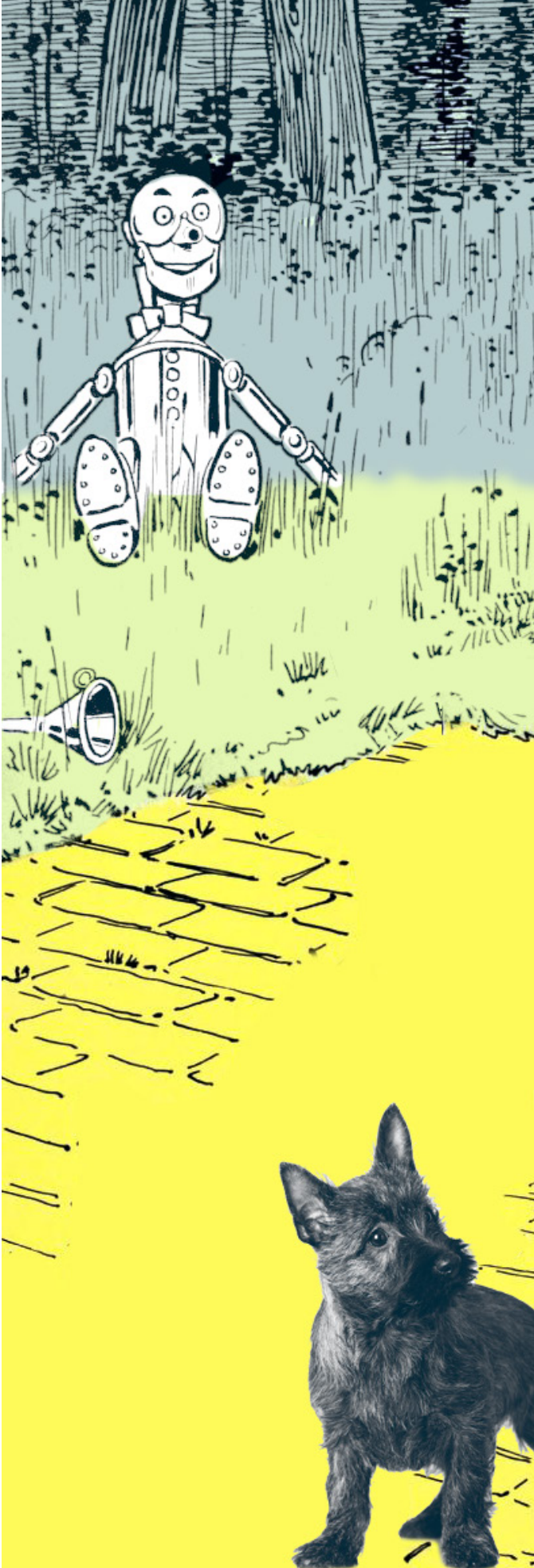
Data migration

A big issue for organizations that already have on-site Exchange servers is migrating accounts to Gmail. There are a number of tools like [GAMME](#) that Google provides which helps streamline data migration. In fact, some find the process of moving to Gmail easier than migrating to Office 365.

Google provides a [number of automated options to migrate data](#) from various applications and Google GooRu offers [several migration guides](#).

"When we went live, we moved mail, calendar, and contacts with the Google [GAMME tool](#)," says Gale. "We ran full migration testing ahead of time and cleaned up issues found with bad attachments or corrupt meetings so the actual data migration was not really a problem for us."

"I typically support enterprise installations that are still using Google Apps alongside of traditional file servers," says McGrail. "We used the the 'many hands make light work' process to have users move their files to the cloud slowly but surely."



In many cases, moving to Gmail is the real driver of migration. Incorporating Google Drive becomes an added bonus in that case. As Google rolls out more features to better mimic traditional file sharers, look for a greater desire to move everything to the cloud.

“Data migration is one of the single biggest barriers to customers moving to the cloud,” says Fintan Murphy, CEO and co-founder of Damson Cloud. “It slows the deployment process down and can be a big headache for companies. This is also a big surprise to a lot of companies who assume it should be a simple one-click process. My recommendation if you are considering any move to the cloud is to acquire the services of a trusted Google Apps Partner to assist in your migration and deployment. It will go a lot smoother and be well worth any additional costs.”

On a smaller scale: “When a user leaves your company and that person’s manager wants to receive their emails, creating an alias in Google Apps isn’t the best solution,” says Melanie Masterson, Senior IT Administrator at Marin Software who currently runs Google Apps for the company. “Create a group instead.”

Account sync

Another important early task is synchronizing your accounts. The most popular way to handle this is with [Google Apps Directory Sync \(GADS\)](#). Once again, there’s a Wizard to help guide you through it. You can synchronize your Active Directory or LDAP user accounts to Google Apps using GADS. Passwords can be synced using [Google Apps Password Sync \(GAPS\)](#).

“The initial configuration is slightly complicated, but once it’s running, it works brilliantly,” says Rivers. “In a very short period of time, you can replicate your local user accounts and passwords on your Google Apps domain.”

“You can also sync Active Directory to Google via different AD groups mapping to different Google orgs with different functionality,” adds Gale.

“We use cloud-based identity management service Okta and were able to easily sync Active Directory with Okta,” says Masterson. “We set up a new user in Active Directory, which syncs to Okta and then provisions everything in Google Apps. It runs smoothly.”

Customization

Many organizations operate generic out-of-the-box Google Apps. They push the business version of Chrome to all users and use Chrome GPO's with Active Directory to provide a consistent user experience. From there, users can customize for their individual needs. Google has made customization painless so there is no reason you shouldn't adapt your implementation to fit the specific needs of your organization.

"Google Apps is really customizable," says Rivers. "Google has really thought out everything from syncing your Active Directory to managing Chromebooks. It gives administrators granular control to manage Google Apps as they wish. We're using a number of marketplace apps to do things such as monitor Google Drive, create usage reports, and back up user documents."

Some highly specialized industries make sure add-ons and extensions follow a strenuous path to ensure they are vetted for stability and security. In some cases, only native Google extensions are allowed. CIO.com has presented a list of the [10 most powerful add-ons](#) and hundreds of other apps can be found at the [Google Apps Marketplace](#).

"Take migrating to Google Apps at a steady pace. It's very tempting to just 'switch it on,' but you risk overloading your users with new apps to learn and that can be a bit overwhelming."

– Karl Rivers, Network Manager for Biddenham International School in Biddenham Turn, UK and founder of [ClassThink.com](#)

No place like home

Nothing makes you feel more secure than being in the comfort and protection of your own home. Isn't that why Dorothy was so desperate to get back there? So click the heels of those ruby slippers of yours and let's talk about something you're constantly looking to keep safe – your data.

Data Storage

An [article on What if?](#) recently estimated that Google is operating nearly 2.5 million servers containing about 10 exabytes of active data. That would be 10 million terabytes. In other words, a lot. They are very secretive – understandably – about their infrastructure, which is probably a good thing.

"We made clear to staff that there are certain documents that we don't feel are appropriate to store in Google Apps," says Rivers. "But we know users are busy and don't always have time to review policy documentation. So we use a combination of [Google Vault](#) and third party backup providers like [Backupify](#) to monitor data storage."

"We don't overly manage data storage," adds Gale, "except when it involves employee transfers or terminations. As overall adoption of Drive and Sites grows, I expect this to be more important for us."

Third party tools like [Google Apps Manager \(GAM\)](#), and [General Audit Tool \(GAT\)](#) also help admins better understand what is being used in the domain and by whom. It can also assist with data transfers.

"The nice thing about Google Apps is the collaboration piece where users can share documents and links very easily," says Masterson. "We advise users to send links as opposed to email which can slightly reduce the amount of emails and storage."

"Google's storage quotas have been generous and I rarely have to arrange to buy more," says McGrail. "With Google's move to pooled storage for the entire organization rather than assigning limits to individual users, I imagine it will soon be more than we will ever realistically need to worry about."



Data security

We've written before about the [security of the Google Apps domain](#), but that doesn't mean you still shouldn't take steps to ensure your data is safe.

"Data security was a huge concern for us," says Rivers. "We wanted to make sure we knew where our data is being stored and how safe it is. We also updated our Information and Communications Security (ICT) policies and educated our users about data protection responsibilities such as which data is appropriate to store online and which is not."

"We use a combination of native reports, applications, API's, and third party tools to help find and scope security related concerns that we may have," adds Gale.

"I manage data security by focusing on security before features," says McGrail. "Preventing users from using features that would sync Google Drive to PC's/Macs or limiting outside sharing can be annoying, but sometimes that might be the most realistic approach to safeguarding your data."

"Also the platform is evolving so quickly that I often take a very austere approach and enable new features much more slowly than some firms," he continues. "I still like to experiment with new features and love to bring on new processes that save time and energy. But often times I do considerable testing with a group of 'guinea pigs' that helps lay some groundwork so general use adoption can be a smooth experience."

"We use additional tools such as [Flashpanel](#) for data security monitoring, [Google Vault](#) for email compliance and [Backupify](#) for cloud-to-cloud backup of our corporate data" adds Murphy. "We recommend to all of our customers that they put in place similar systems and procedures."

Other security measures include prohibiting Google Drive docs from being published on the Internet and setting up a user warning when users attempt to share a document outside the domain. Some admins prevent users from making Google Site public on line, not enabling Google+ because of the inability to block public posting or profile publication, blocking Calendar details to be shared outside the domain, and stopping external users from connecting to Groups interfaces (allowing them to only post by mail).

Google Support provides a comprehensive [FAQ site](#) with an extensive outline on security.

"I feel working proactively rather than in the traditional reactive way of thinking is a more appropriate "cloud model" approach to security."

– Justin Gale, blogger, Google Apps Certified Administrator and IT Strategist

If I only had a brain

Do you while away the hours, conferring with the flowers and consulting with the rain? Probably not. But you would be able to with the time you save managing Google Apps thanks to the wide range of tools available.

Control Panel

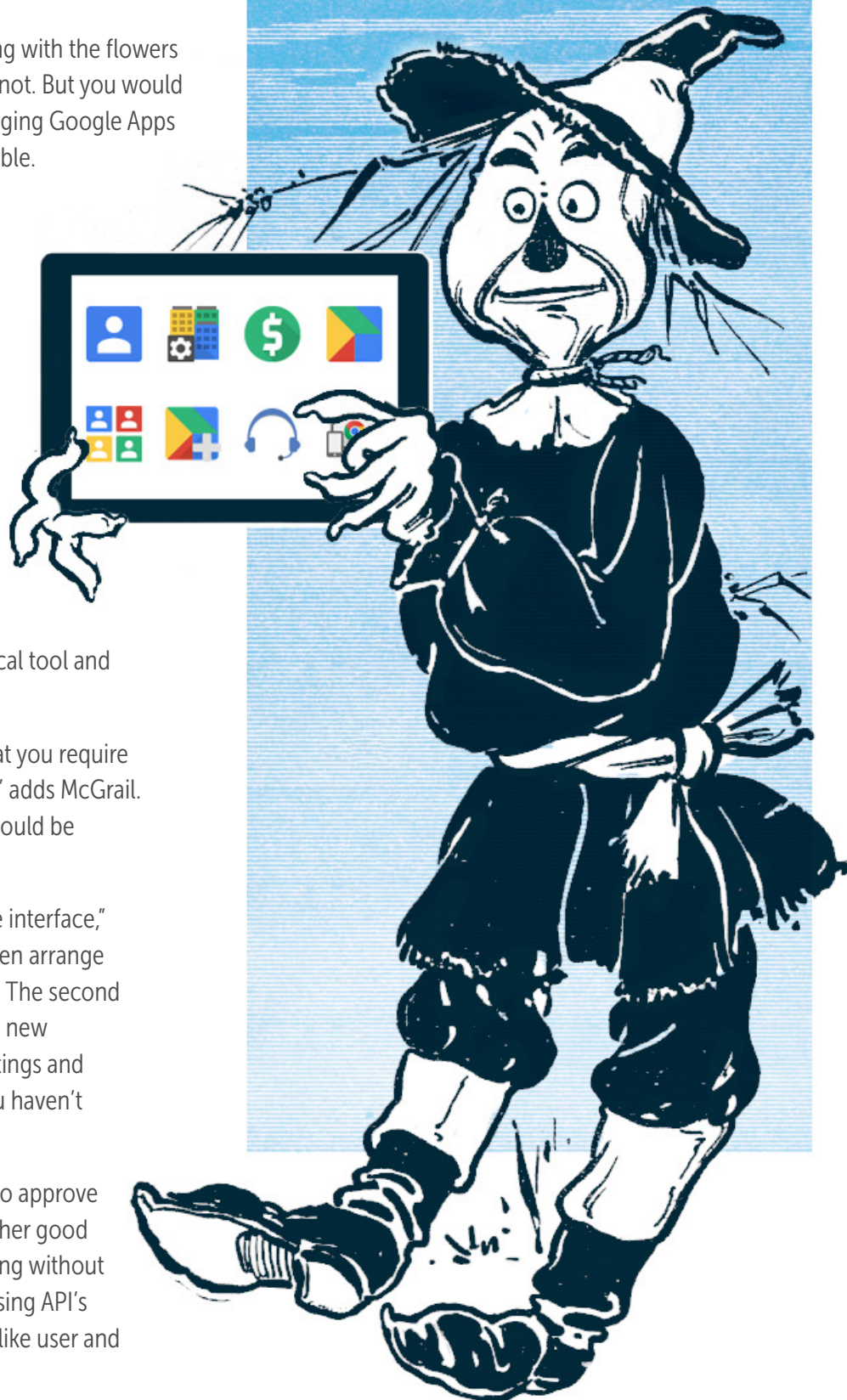
Through the Control Panel, you're able to manage all Google Apps services from one central location, including email lists and user accounts. It also allows you to monitor email activity statistics and customize how your domain is presented to users.

"Step one is to clearly define who the administrator is in your organization," says Flama. "The control panel is a critical tool and needs to be managed carefully."

"I think the biggest piece of advice is that you require the use of Google's [2-Step Verification](#)," adds McGrail. "It's free so there's no reason anyone should be accessing the control panel without it."

"The first thing to do is to customize the interface," suggests Gale. "Drag all the icons up then arrange them in order of your frequency of use. The second key tip is to periodically go through the new Administrative Panel and check the settings and options on everything...especially if you haven't used it yet."

"Establishing a Change Advisory Board to approve any change in the control panel is another good idea," says Flama. "Never change a setting without validation from other administrators. Using API's to automate all non-value added tasks like user and group lifecycles is also a time-saver."



“Google has made some significant improvements to the control panel,” adds Murphy. “However, some functionality that administrators require is still missing. I would recommend checking out applications such as [Flashpanel](#) from BetterCloud. It is the number one admin app on the [Google Apps Marketplace](#) and it helps administrators automate and execute tasks with ease. A great example is setting a company wide signature, a task our customers request frequently. This cannot be done natively in the control panel but Flashpanel does it with ease.”

“Remember that if you can’t find what you need in the control panel, just Google it or check in with support for help,” says Masterson.

Device management

“One of the excellent features of Google Apps is built-in device management,” says Murphy. “The control panel actually has a device management section allowing you to manage Android, Windows phone, iOS and Chromebooks - including the ability to remote wipe devices and set security requirements such as minimum password length.”

“Using Google Apps to manage Chromebooks is a dream,” says Rivers. “It’s simple and reliable and users love the end result. Compared to Windows laptops, our suite of Chromebooks needs almost no maintenance and configuration changes take seconds to apply from a simple web interface. The set up takes seconds and re-imaging them is just as quick. It’s so simple that we’re currently looking at converting a number of Windows desktop-based IT suites to Chromebooks. Since Google Apps is available on most devices, users can always log on from just about any smartphone, tablet, or desktop with Internet access.”

“If our users want to access Google Drive or Google Sites through mobile devices, they have to go through Okta,” continued Masterson. “Security is crucial for us and this additional step offers an extra layer of security and administration. We have the ability to monitor when people log in and where they log in from which helps us track any suspicious activity.”

For other devices like Android and iOS, you can use native Google device management. Another way to handle it might be to move toward implementing a goal of all devices requiring [Google Apps Device Policy](#) to be able to connect.

“I look forward to the planned enhancements for device management from Google that look impressive,” adds McGrail. “They really look to bring device management to an enterprise level soon.”

Reports

The built in report function lets you monitor how Google Apps is being used and which areas might require additional user training, as an example. You can also use third party tools for email auto forwarding of reports, email delegation reports, calendar/resource security, and of course user creation, suspension, and deletion reports to help track licensing.

"I like to see the collaboration report," says Murphy. "Knowing that our users are collaborating more is good. Also I receive a monthly document report to see which documents have been shared outside our organization or publicly. This allows me to ensure there have been no security breaches of our data."

"I frequently use the 'Email Log' report which helps me locate a sender or recipient's missing messages and I can then figure out if it's a Google Apps issue or something else," added Masterson.

Also available are reports for adoption (docs sharing, sites sharing, hits per months with analytics), operations (quota, users, cost of App Engine usage), and security (docs external sharing, mail transfer configurations).

"Dig deep! You'll be surprised how much control over your domain Google allows. If you like tinkering with settings, Google Apps gives you all the control you need."

– Karl Rivers, Network Manager for Biddenham International School in Biddenham Turn, UK and founder of ClassThink.com

"A tip for shared calendars: delegate the calendar permissioning out to a few select folks such as the office manager. This avoids having everyone run to IT to constantly remove or edit events"

– Melanie Masterson, Senior IT Administrator, Marin Software

Somewhere over the rainbow



You know what you find at the end of a rainbow, don't you? That's right, a pot of gold. We can't give you the whole pot, but we can offer you some choice nuggets of advice from our panel of experts.



Use it during presentations so multiple attendees can keep notes and submit Q&A in real time.

Start your implementation with Gmail and Drive then expand slowly from there.



Take advantage of every resource to stay on top of everything going on with Google Apps. Join the [Google Enterprise Community](#), monitor [Google Blog](#), the [Gmail Blog](#), [Google Apps Updates](#), the [WhatsNew Calendar](#), and [Google Apps News](#).



Set up a test domain where you can work with all the new settings under the [Rapid Release](#) schedule. This "sandbox" domain should be a separate installation of Google Apps with a few accounts configured for Rapid Release.



Make "sharing" your default setting. Restrict only if you have serious confidentiality concerns.



Be patient. Google Apps is different from traditional static software. Because it's cloud based it continues to improve each month. If it doesn't have a feature today, that doesn't mean it won't have it next week, next month or next year.

"I am amazed at the number of customers who say, 'well sure it's in the cloud Google will take care of the backups.' Though this may be true to an extent that won't stop a user deleting the data, either by accident or maliciously."

- Fintan Murphy, CEO and co-founder of Damson Cloud

Help Mr. Wizard

It's likely that you'll encounter some issues as you journey through Google Apps. Not necessarily flying monkeys or a terrifying witch, but some problems that will require you to look for help.

"I always go directly to Google Apps telephone support," says Rivers. "Their business level support is outstanding. Problems are resolved quickly by knowledgeable people and the communication is brilliant."

"Users around the world have direct access to a detailed internal [Google Apps Help Center](#) with self service support," adds Flama. "If this doesn't resolve your issue, you can escalate to a centrally managed global helpdesk that handles Level 2 requests. This team can take it a step further turning it into a Google Enterprise support case."

"Without question I turn to the [Google Enterprise Community](#) for answers when I run into a problem," says McGrail. "The GEC continues to grow and together we often identify problems and solutions faster than other options."

The beauty of Google Apps is that there are many resources you can turn to when you run into a problem. Here is a brief list to get you started:

[Google Operating System \(Unofficial Google Blog\)](#)

[Google Chrome Blog](#)

[Google Drive Blog](#)

[Google Enterprise Blog](#)

[Google Mobile Blog](#)

[Google Voice Blog](#)

[The Google Apps Blog](#)

[The Official Google Blog](#)

[Apps Status Dashboard](#)

[Google+ Developers Blog](#)

[Google Product Forums](#)



*"And remember,
as a last resort,
you can always...
Google It!"*

– Justin Gale, blogger, Google Apps Certified Administrator and IT Strategist

Summary

Thanks to the Cloud, Google Apps empowers IT managers like you to work on all those other tasks that have taken a back seat for years. Since you no longer need to worry about patching, upgrading, and just trying to keep things running, you can focus on ensuring that your IT environment provides the information that helps your organization succeed.

The Wizard of Oz's final words perhaps sum it up best:

“I, your wizard, am about to embark on a hazardous and technically unexplainable journey into the outer stratosphere to confer, converse, and otherwise hob nob with my brother wizards.”

We've only scratched the surface of what can be done with Google Apps as it becomes a more integral part of how we do our jobs every day. So, brother wizards, we rely on you to work your magic to keep it all running smoothly.

The end.

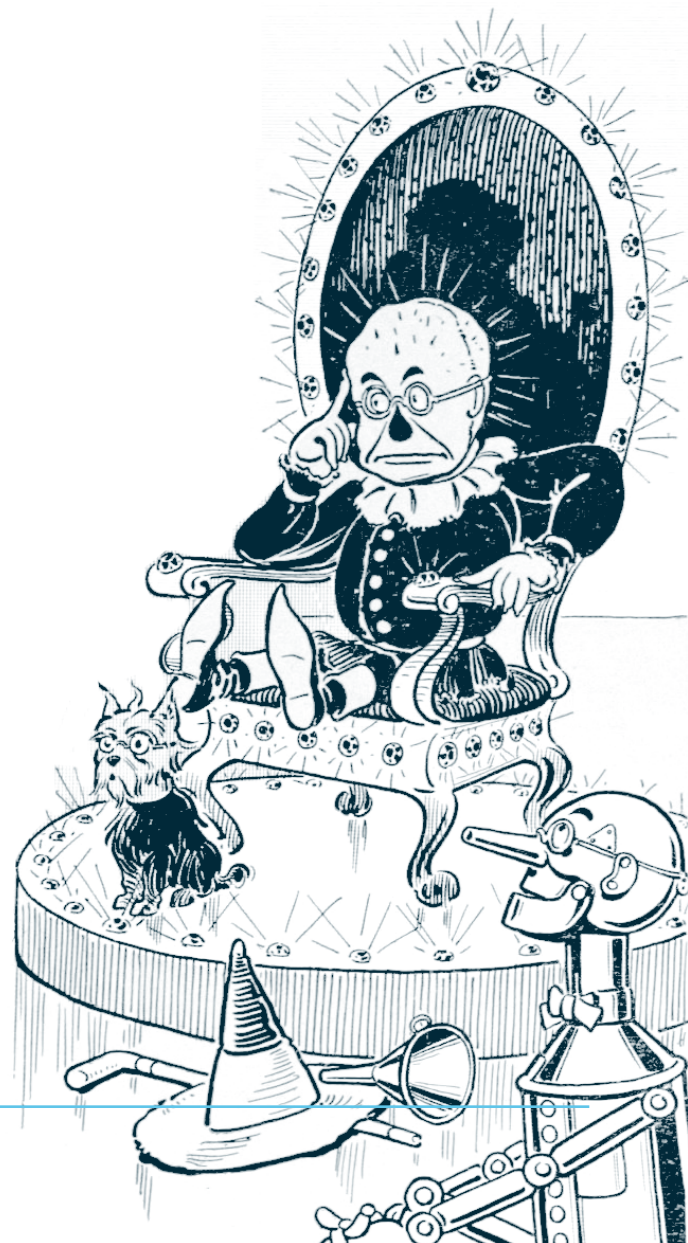
(Run the credits.)



Top 10 time saving tips

So why do we take advantage of all the cool features of Google Apps? Well, they're fun to play around with for one, but really we have jobs to do. That means we're continually looking for ways to squeeze more hours out of the day. To that end, here are some time saving tips from our expert panel.

1. Get Google Apps Directory and Password Synchronizer properly set up first. It will save you time and headaches later on.
2. Delegate account management to others through Google Apps Control Panel. You can give forms access to manage accounts and change passwords to lighten the load.
3. Lock things down! It's always so much easier to open them up later than to try to put the toothpaste back into the tube.
4. If you run more than just Google Apps, look into an SSO or password synchronizer solution to reduce administrative burden and help keep accounts secure.
5. Get Google Apps Certified. This will help ensure that you know the basics to effectively manage a Google Apps domain and save time doing it.
6. Learn Google Apps Scripting. There are some great resources to help automate tasks. As Google continues to enhance the APIs and the platform, you can really make quick work of many otherwise time consuming tasks.
7. Train your Power Users and make them champions! Spend the time to teach them advanced tips and tricks up front, then empower them to assist other users when they have questions.
8. Automate your user account lifecycles.
9. Get the mobile app for iOS and Android. It will allow you to do tasks on the go.
10. Set up a [Google Apps Training Portal](#). Google provides a great template you can use to get started. This will centralize all your training materials rather than distributing them individually.



Our panel



Karl Rivers, Network Manager for Biddenham International School in Biddenham Turn, UK has been working with technology in education for over a decade. Karl founded ClassThink.com to provide a hub to share best practices and technical information with others in the educational field.



Justin Gale, blogger (justingale.com) and IT Strategist/Visionary by night, mild mannered IT Architect (with 20+ years experience) at Bombardier Recreational Products during the day.



Kevin A. McGrail is a recent addition to Google's Top Contributor program and one of the first Google Apps Certified Administrators. He is based just outside of Washington, D.C. in the US and works as a Google Subject Matter Expert and computer consultant at PCCC.com.



Benoit Flama is the Group Google Apps Manager for a multi-billion dollar international automotive company based in France. His organization has 45,000 Google Apps users at 124 production sites in 29 countries



Fintan Murphy is the CEO and co-founder of Damson Cloud. Fintan has launched and led a number of Technology businesses over the last decade and has gained significant expertise in training, change management and public speaking throughout his career and regularly speaks about Cloud Computing at many conferences.



Melanie Masterson is Senior IT Administrator at Marin Software, which provides advertisers and digital marketing agencies with a web-based management platform to manage revenue acquisition. Prior to Marin, Masterson held various system administrator roles.