

Now that we have introductions out of the way, let's get to the presentation at hand. When faced with incorporating such a vast and varied user population how do you incorporate their needs, plan for the future, all while balancing the companies needs and requirements?

The fastest and most efficient path to making your users love IT again is through cooperation. If you can help the user articulate their needs, likely you already have a tool in place for that. We as Mac Admins both use and make tools to help and support our users so they can do their best work, not to be a hindrance or bog them down in red tape.

Earlier I mentioned that this year we started raising chickens. Something I didn't know before Stephanie bombarded me with information in her campaign to raise chickens is that chickens are actually very smart birds and can learn a lot with the right guidance.

”Alone we are smart. Together we are brilliant.”
- Steve Anderson, Educator



Here you will see one of our chickens, Clarabelle, using her first iPhone. Alone, she is smart, but once I offered her an iPhone, together we became brilliant. We’re still working out the kinks with her FaceID recognition, but we’ll get there. I offered for her to give this presentation however she has prior engagements this week and sends her regards.

In all seriousness, I chose this quote because it reminds me of the many times I’ve been in a situation that my co-workers and management didn’t really know what I did, and I felt I had no one to even bounce ideas off of. I find the process of brainstorming incredibly important when attempting to come up with a solution that is fit for purpose.

What I needed to remember in those instances, and now what I am sharing with you, is that even more so today you are not alone.

It’s important to engage with not just technical equals but also with your users as well. Vetting ideas with them and gathering their feedback. This is also useful from IT co-workers. And last but not least we have an incredibly strong and dynamic community for Mac Admins. Use this community to your advantage.

Just because you can,
does not mean that you should.



It's easy to blindly lock down every single setting on a system. It feels safe and gives the false security that your job here is done. No. Our job should be much more than that. We need to make sure we are fighting, not just to keep our users secure but also allow them the flexibility to use their Mac as it was intended to be used.

- Fight back against “Because we have always done it this way” and reevaluate regularly both wins and losses when it comes to this.
- Fight back against “In Windows we do it this way so we have to do it the same on the Mac” - this is rarely the case and almost always leads to frustration for both the admins and the users
- Only force settings that you absolutely have to - security requirements, legal holds, etc.
- Explain why settings are the way they are in terms your users can understand - run your communications by a test user for readability. We may not always realize when we're using terms that are not understood outside of IT.
- It is our job to empower our users to do their jobs to the best of the abilities. We provide the tools to make their jobs easier.



Securing Apple OS

An objective, consensus-driven security guideline for the Apple OS Operating Systems.

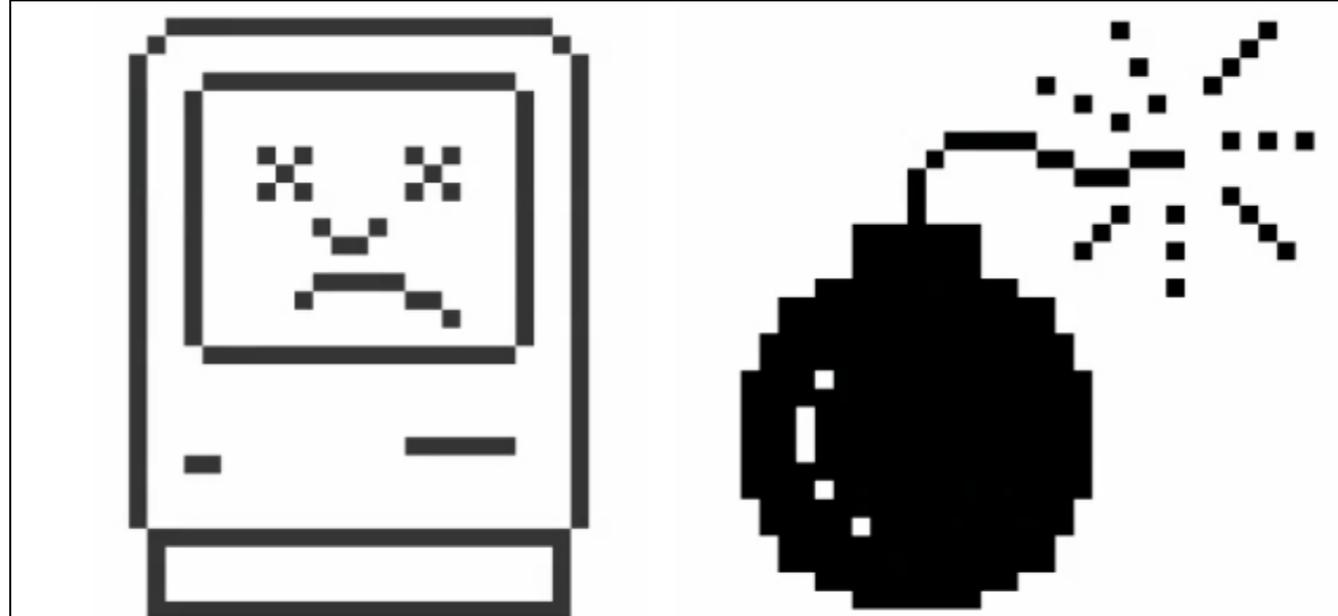


https://www.cisecurity.org/benchmark/apple_os/

The reason I chose to mention the Center for Internet Security (CIS) is that it is a crowdsourcing format. Anyone can contribute to not just the settings to harden but how to set those setting and how to audit them. I strongly encourage you all to contribute in whatever ability you can.

My organization has started the evaluation process of which settings recommended by CIS make the most sense for our users. The issue I see with available security baselines that I have encountered is that they are already out of date when they are finalized. In this instance Sierra was just finalized and High Sierra has just started. This is something you will need to address with your info sec teams.

What you think will happen if Users have Admin rights



- What the common idea is of what will happen
 - Everyone breaks their systems
 - Rampant Virus outbreaks
 - Epic levels of Malware
 - Non stop support calls and tickets
 - All of the illegal downloads!!!

What actually happens

Users take more care of their systems. In children's schools in my home town the schools are starting to allow the children to customize their Chromebooks with removable vinyl. If you setup users as standard accounts you'll need to manage and anticipate each time they need to escalate privileges. (Printers, services, software, etc...) On top this you have manage those requests over time. Maybe it's a self service model maybe it isn't. However cost is a factor for any additional administrative overhead. Now I'm not saying kiosks should be admin. But I am saying to keep an open mind. These are not Windows systems. Apple does a good job of protecting users from things that go bump in the night.

In our experience:

- Happy Users that take pride in their systems
- Dramatically less support calls
- Very low re-provision rate
- Empowered users that can just work
- IT does not (cannot) anticipate every task the users will need

Transparency is operating in such a way that it is easy for others to see what actions are performed.



- Transparency is essential to gain the users' trust. Users want to know the “what” and “why” of what IT is doing to their systems.
- Visibility in workflows can lead to improvements based on feedback outside your immediate workgroup
- When people don't realize how much something truly costs be it money or time, they generally don't appreciate it.
- Allowing users to “own” their systems means they take pride in maintaining the systems, keeping overall replacement costs down.

Teaching instead of Telling



- It is our job to empower our users to do their jobs
- User education website
 - How to instructions
 - Videos
 - Email Phishing Education
 - Feedback tool - feature requests? It's ok to solicit user feedback, they want to be heard.
- Teaching users "The What" and "The Why" is also transparency



You've likely noticed I'm pretty vague about my day job. Well, there's good reason for that, a very serious legal team and being married to a public relations maven who's a stickler for release forms. So for the purposes of today's presentation we're going to talk about Acme Corp. and their users' experience.

This is Acme's Learning Center's homepage. The most important feature of this page is that it is always evolving with the users' needs.

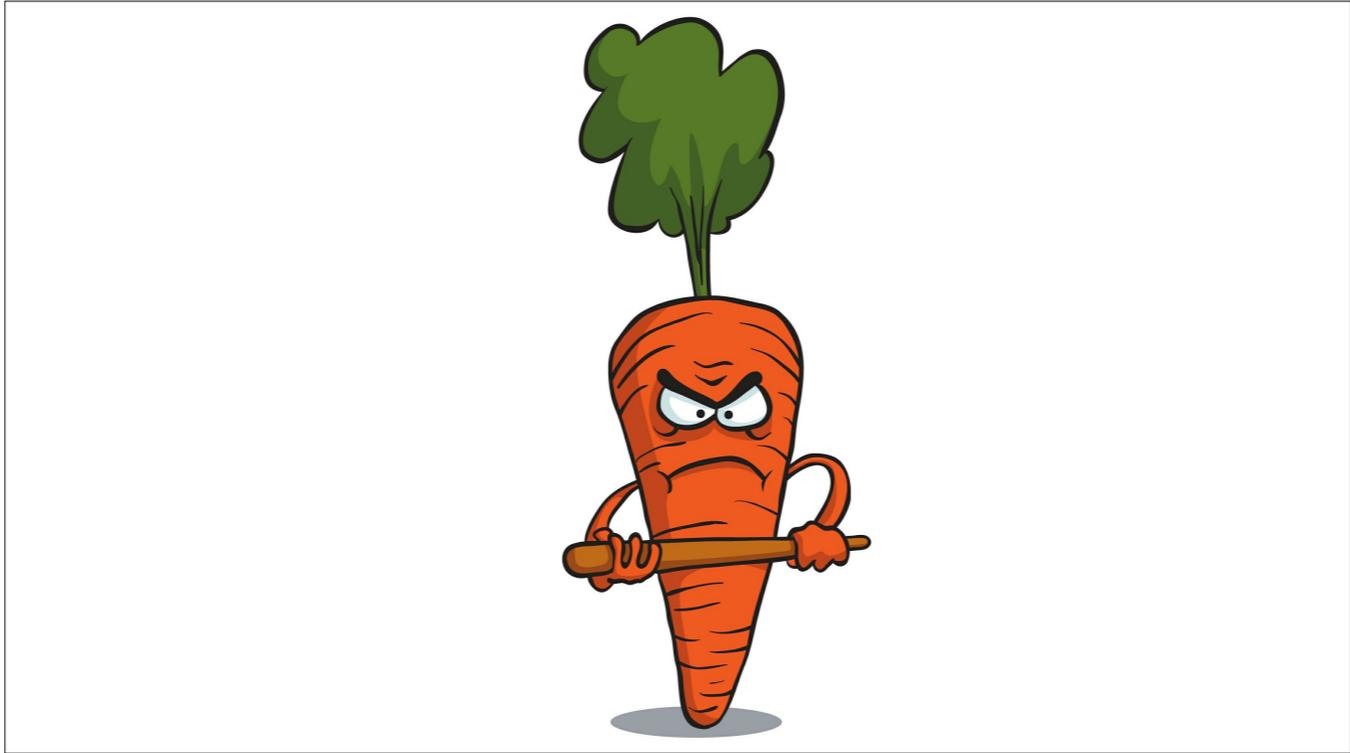
This idea, of putting information in the hands of the users, has been called "Tier Zero".

We all know what Tier 1 support is like; the first responders on the support phone number. They refer up to Tier 2, and then Tier 3 and upwards on to us in this room supporting the whole team.

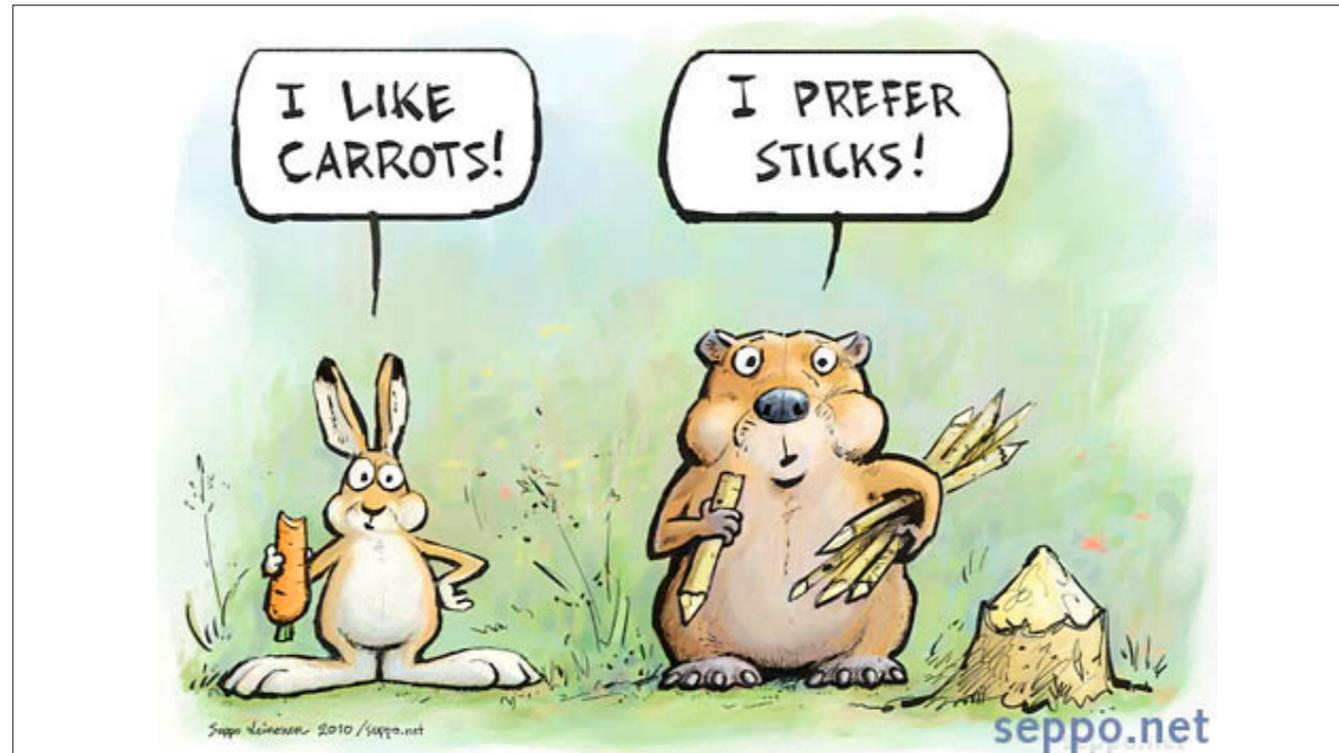
When we put information in the users' hands at Tier Zero, we empower them to be more self sufficient.

That lets the users fix their own problems, drop the number of calls to Tier 1, and the calls that do make it to Tier 1 tend to be more worthwhile tickets

(Helpdesk shouldn't have to explain how to add an icon back to the Dock)



Angry Carrot and the Stick



There are many ways to solve problems or inspire users to do what is best for them.

Each company culture is different and requires it's own solution. With a bit of investigative ingenuity, you'll be able to determine what works best for your users in your environment.

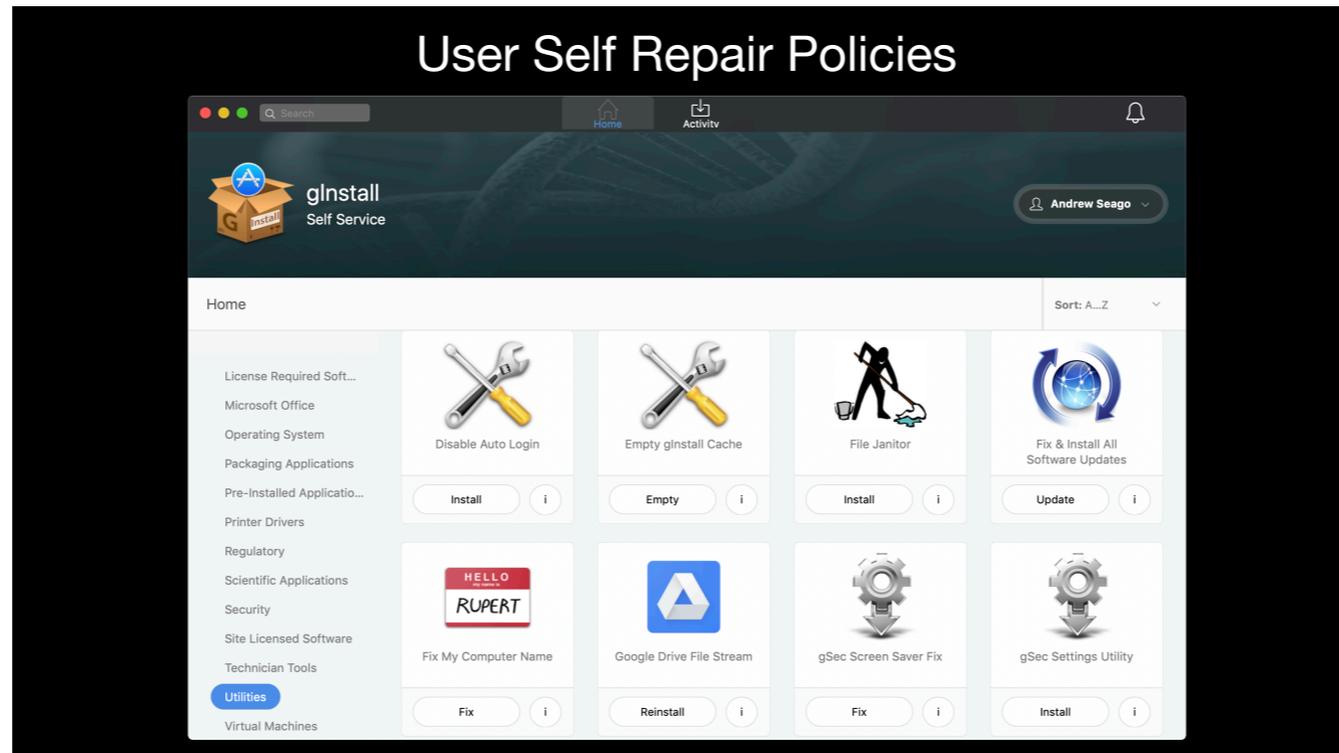
Carrot on a Stick: Software Installation at Acme Corp.



- Self Service is **ONLY** way to install licensed software
- QuickAdd.pkg as a Self Service Installer
- WiFi Configurations
- Incorporated Self Help Tools
- Software Updates
- Technician Tools **ONLY** Available on Self Service

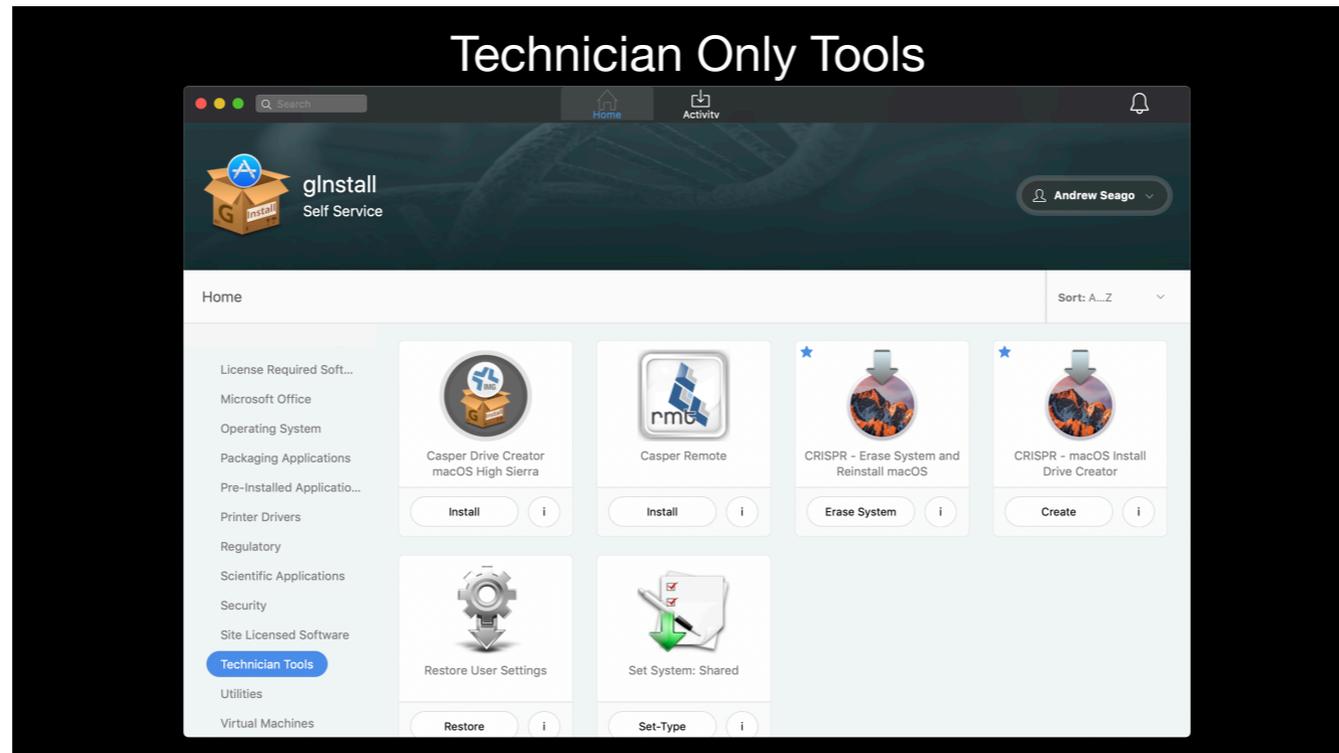


User Self Repair Policies



Tier 0 Support or assistance for Tier 1

Technician Only Tools



Tools visible only to technicians Tier 1-2

Managed Software Center (Munki)

Managed Software Center
Your source for software for your Mac.

All items

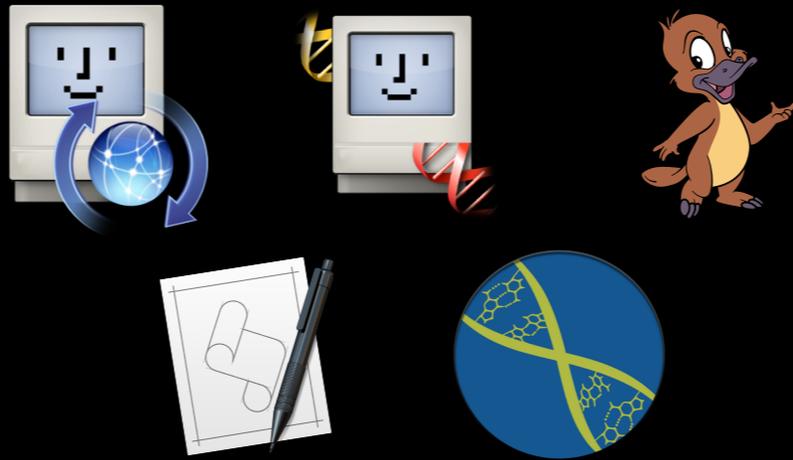
Software Name	Developer	Status
1Password	AgileBits Inc.	INSTALL
Acorn 4		INSTALL
Adium	The Adium Team	INSTALL
Adobe Acrobat Reader DC	Uncategorized	INSTALL
Adobe Flash Player	Adobe	REMOVED
Adobe Reader	Adobe	INSTALL
Adware Medic	Thomas Reed	INSTALL
Airfoil	Rogue Amoeba	INSTALL
Alfred 2	Running with Crayons Ltd	INSTALL
Alinof Timer	Alinof Software Srl	INSTALL
Amadeus Lite	Uncategorized	INSTALL
Android Studio	Google	INSTALL
Apache OpenOffice	Productivity	INSTALL
AppCleaner Uninstaller Utility	FreeMacSoft	INSTALL
AppCode	Uncategorized	INSTALL

Categories

- Audio
- Communication
- Developer
- Developer Tools
- Development
- Drivers
- Editors
- Email
- Graphics & Rendering
- Internet
- Mail Clients
- Mathematics
- Media
- Media Players
- Munki Tools
- Network Utilities
- OS Utilities
- Organization
- Productivity
- Remote Access
- SFTP Clients
- Science
- Security
- Social Networking
- System Administration



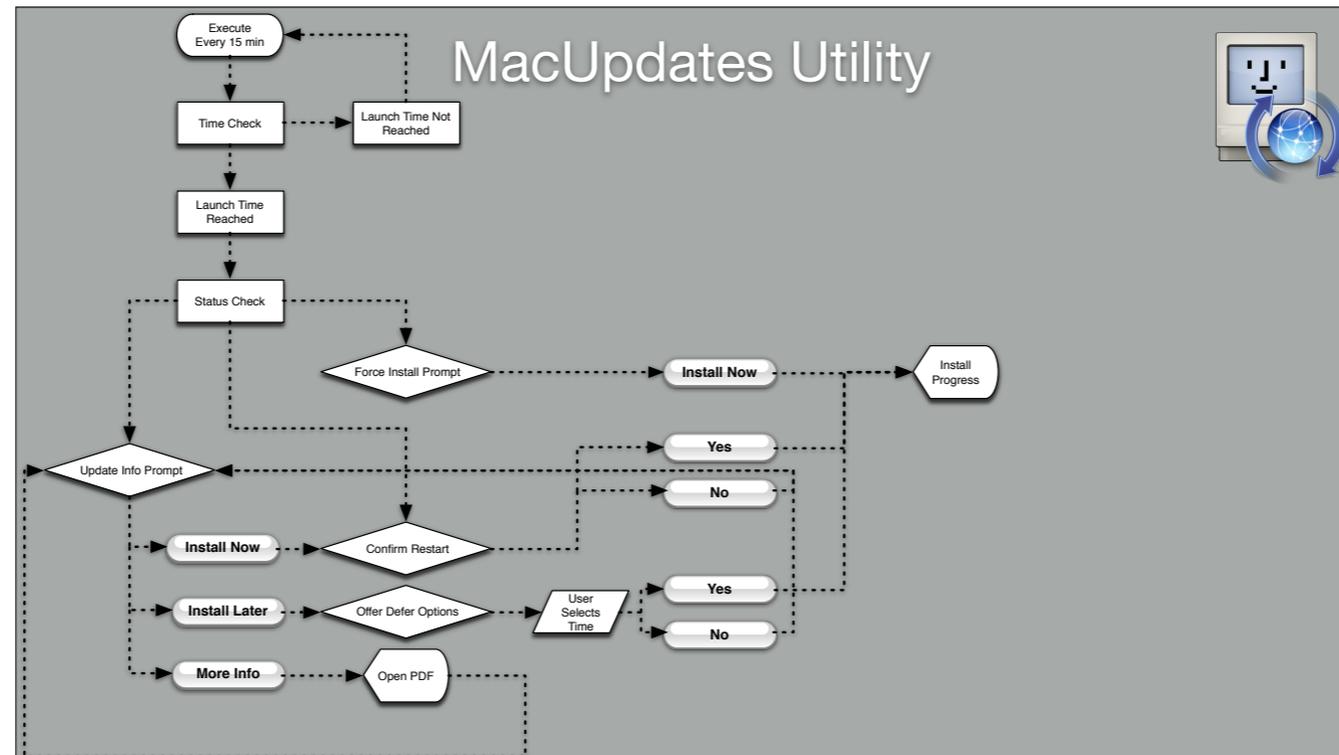
UI Examples





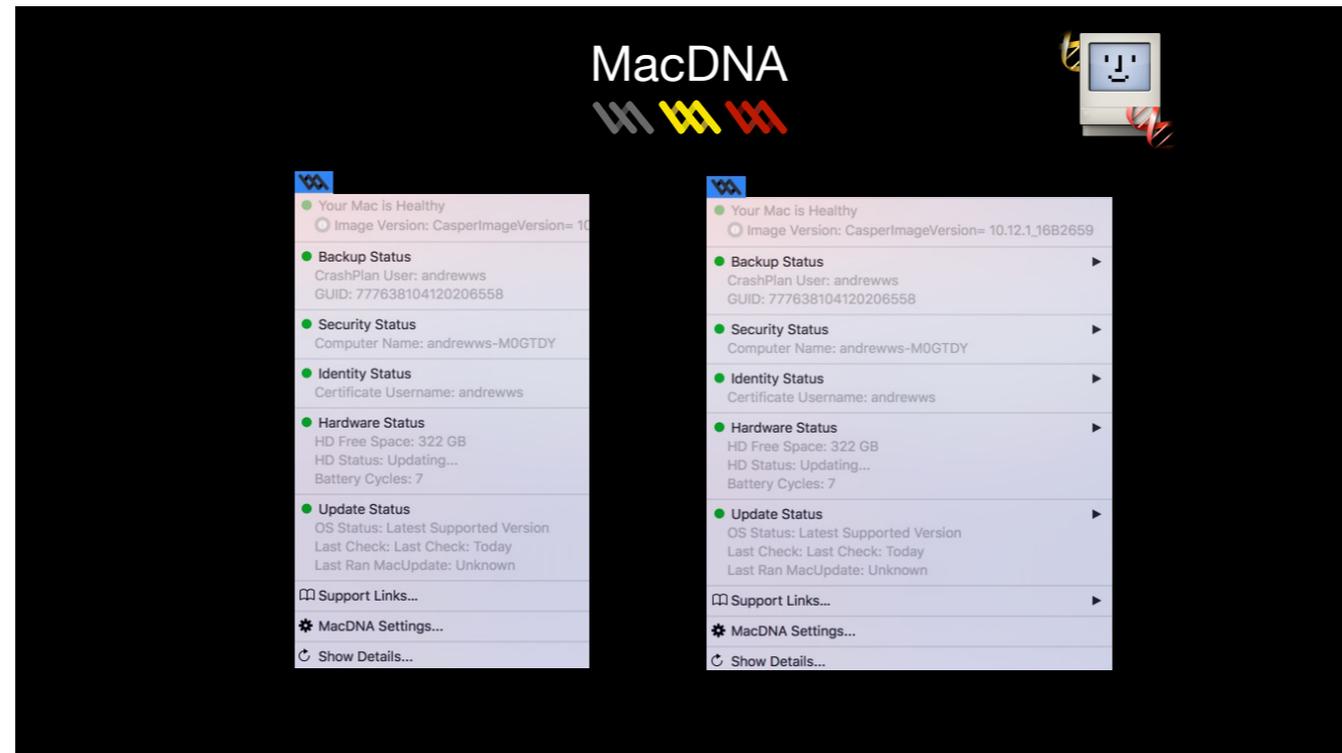
Awhile back we were faced with a new challenge. An increasingly aggressive security team that wanted everything patched frequently. All this while not being able to interact with the user. Join that with a Mac population that are recovering Windows addicts and therefore never reboot and you have quite a dilemma. You couldn't silently push Microsoft Office updates if one of the applications were open. This had the potential to corrupt the common database they both used. At the time our client Management solution was lacking the tools natively to help us.

This is where MacUpdates came into play. It is truly a "If you build it, they will come" situation. The entire workflow is not purely one thing. It is a combination of bash UI scripting using cocoaDialog, smart groups, policies and extension attributes. Many of these are jamf terms however this could be replicated using anything that can leverage reporting based pkg deployments.



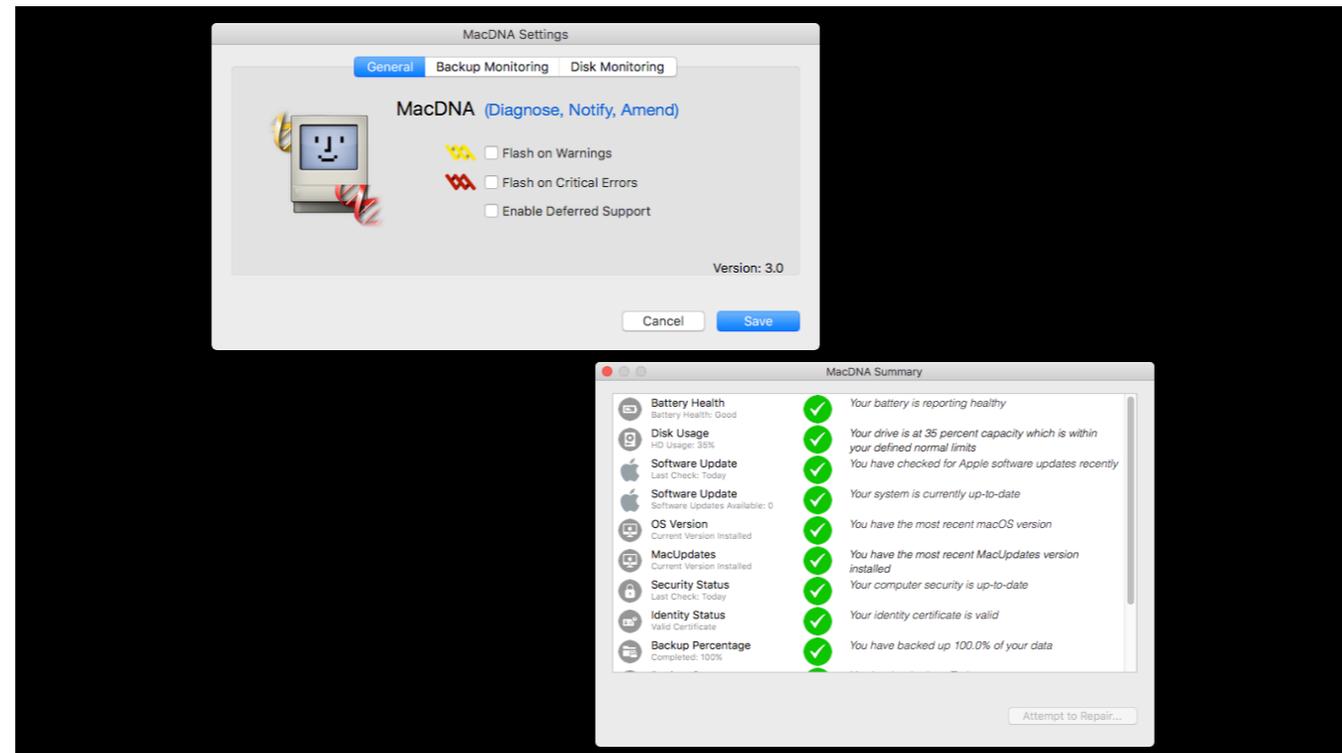
Without focusing too much on the how I'm going to briefly go through the workflow. The idea isn't that you will be able to use this for inspiration in your own different environments. When faced with more difficult situations to overcome while scripting I find it is helpful to use visual workflows such as the one above I created with OmniGraffle.

1. Create targetable smart collections of systems based on systems missing current application versions
2. Cache all Application updates and system software updates ahead of interacting with the user
3. Create a PDF explaining these changes to the user and deploy it also to the system.
4. Then once all of that is done we go over to the user interaction workflow above.

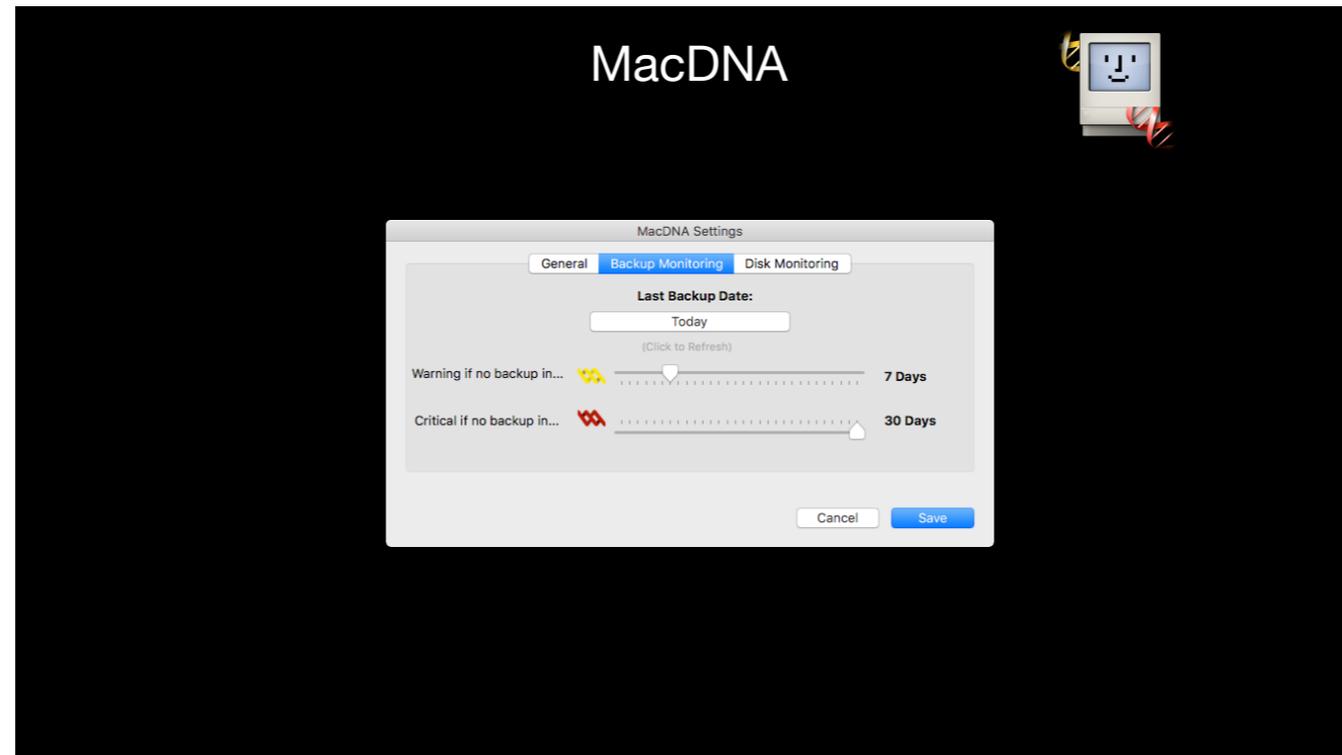


Early on in my time at my current company, I was tasked with leading a team of three people for 6 months attempting to contact users and proactively fix issues they had on their systems. After 6 months we contacted less than 20% of the people we intended too. Here is where MacDNA comes into play.

MacDNA is an internal tool created for us and maintained through the years. This tool was created initially as a way to show users CrashPlan backup status long before the product had that capability from the vendor. Since we were already working on architecting this tool we wanted to use it for much much more. Leveraging this tool we have the ability to provide users with proactive support. And in the best way possible by them calling us in IT not the other way around. Through the years this tool has evolved to handle all the different status in this screenshot.



The process for putting something that seemed so intrusive at the time to users on their system was a long one. We first started piloting to immediate IT peers and then to important individuals outside of IT. In each feedback meeting we would hear different vastly different but clear ways they wanted the tool to interact with them and how they wanted to interact with the tool. In one meeting someone would want it to flash red and in that same meeting you would have someone that couldn't even work if it was flashing and needed it to remain static as one color. The same thing with backup alerts. Some people wanted their settings aggressive so that if they had not backed up for 3 days they wanted an alert. Others didn't care and wanted the maximum amount of time before it flashed.

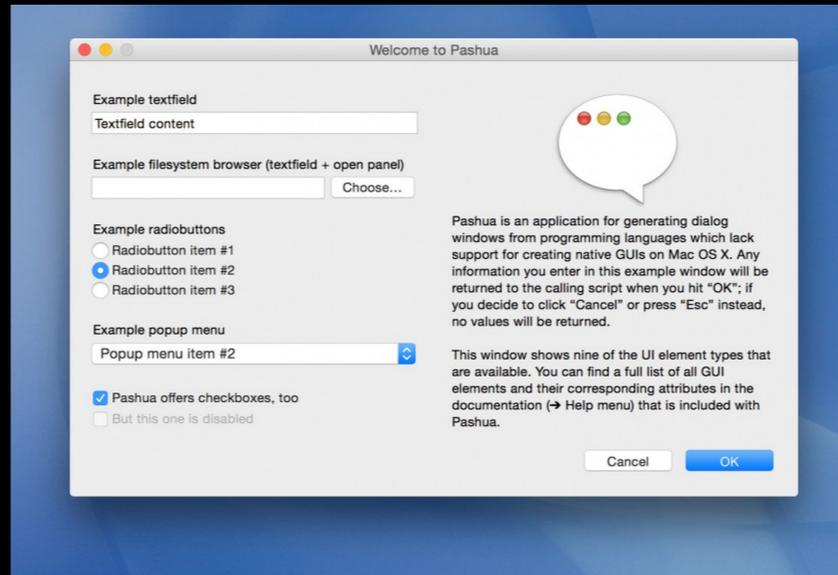


And so we built in settings to allow each user to modify their experience as they wanted.

MacDNA is so engrained in our day to day experience that users know when it's red to simply call the service desk. I've even heard for users that have left the company that they just thought MacDNA was part of the Apple experience and were very disappointed when their next organization didn't have something similar.

That is the best experience of all. Once that feels so native that the users actually think it's part of the OS.

Pashua



Platypus

Platypus

App Name

Script Type Shell Args

Script Path

Interface Text Window Text Settings

 Platypus Default

Identifier Run with root privileges

Author Run in background

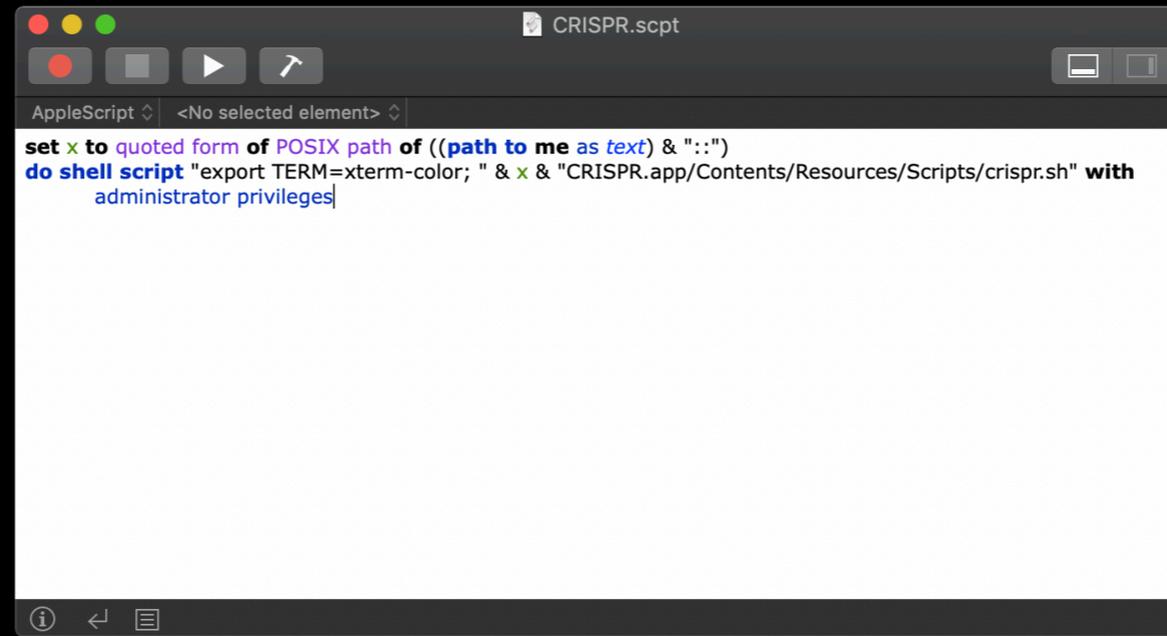
Version Accepts dropped items Remain running after execution

Files to copy into the application's Resources folder (default working directory for script)

Bundled Files

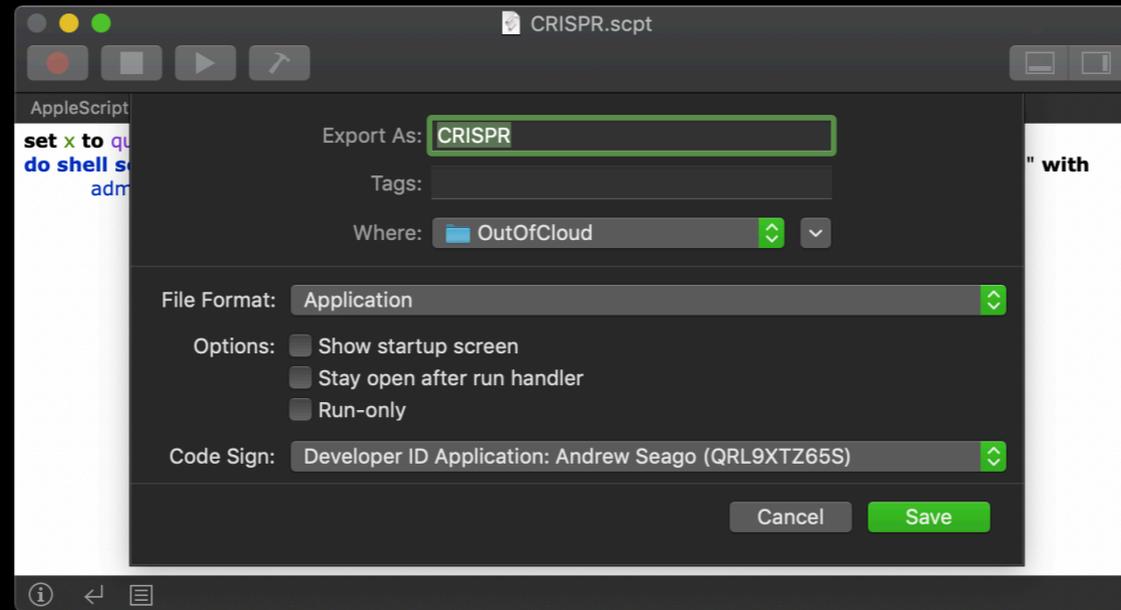
Estimated final app size: ~913 KB

AppleScript Examples



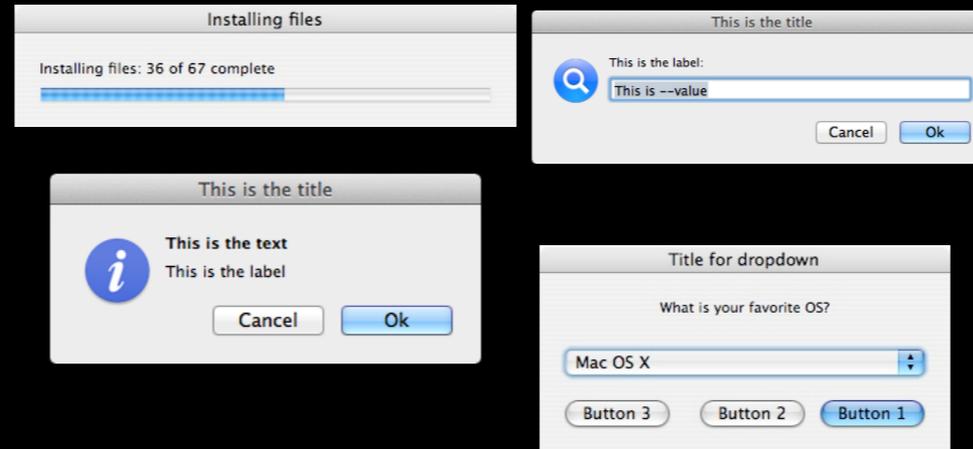
```
AppleScript <No selected element>  
set x to quoted form of POSIX path of ((path to me as text) & "::  
do shell script "export TERM=xterm-color; " & x & "CRISPR.app/Contents/Resources/Scripts/crispr.sh" with  
administrator privileges
```

AppleScript Examples



CocoaDialog Examples

<https://github.com/andrewseago/cocoaDialog-examples>

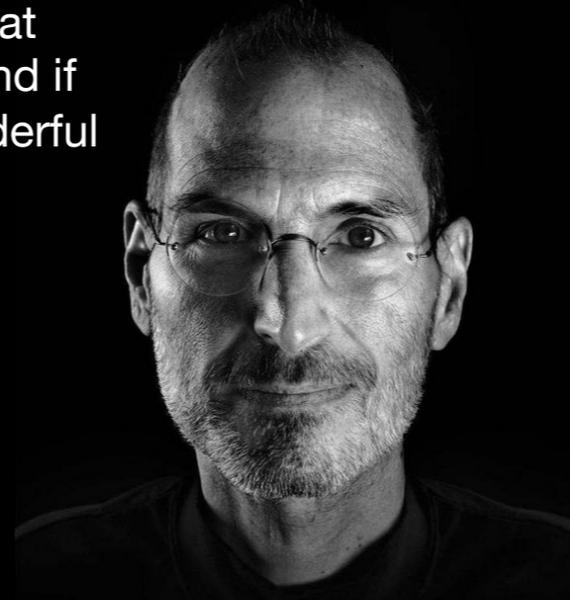


CocoaDialog Examples

<https://github.com/andrewseago/cocoaDialog-examples>



“Technology is nothing. What's important is that you have a faith in people, that they're basically good and smart, and if you give them tools, they'll do wonderful things with them.” - Steve Jobs



My belief is that our job is to provide the tools that the people we support need.

We should be making the user experience one that disappears and all that's left is the ability for our users to create, build and dream.

We should include our users in their IT experience. We need to make sure IT isn't something that just happens to them. It's something that happens with them.



- Community - Slack, Twitter, Email, Local Meetups

Use others for:

- Inspiration
- Logic checking
- Health check



Community is based around the principal of knowledge sharing. I want to share a few members of the community that have saved me frustration and countless hours of trying to do something my own way if at all.

Greg Neagle - On the surface it may seem as a stretch that someone that uses Jamf could repeatedly be saved by someone so deeply involved in **Munki**. That's the thing though, no matter how we are managing Macs they are still Macs.

Take **Reposado** for instance. I've been using Reposado since Mac OS X 10.7. Making the switch to Reposado from Apples Software Update Server changed my world. At the time it had various stages of instability and we were increasing our Mac footprint at an exponential rate.

CreateOSXInstallPkg - Before Apple had really ironed out the macOS installer as well as they have now this tool in my environment has single handily upgraded 75,000 Mac's. When you step back and look at that it's pretty incredible. All from leveraging community.

MacMule - **AUTOCASPERNBI** - This tool saved hours of building images for technicians bootable OS imaging drives.

derFlounder - When it comes to Rich the list is far too long in the ways he has helped me. Extension attributes, iCloud configuration profiles. His site has near default approval of any code he's written in being used in our environment.



MacAdmins Podcast
<https://podcast.macadmins.org>

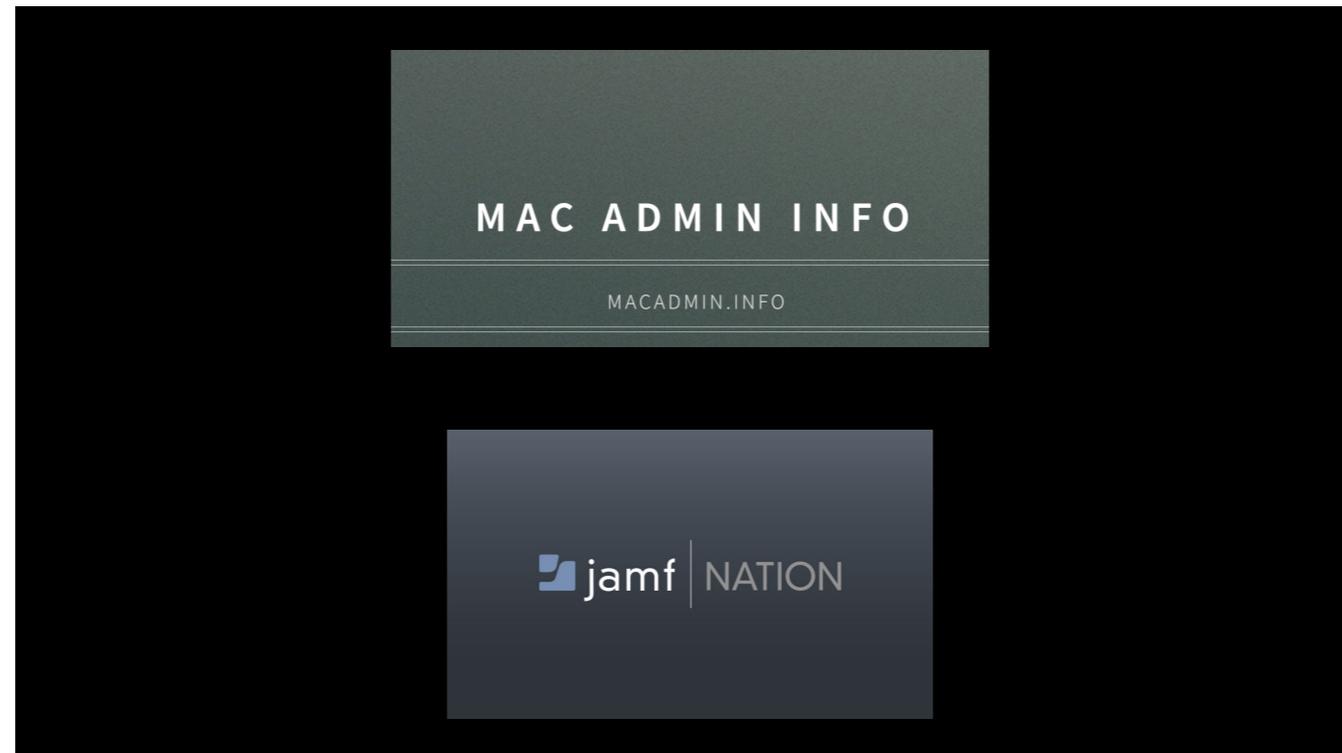
REGULAR HOSTS

- **Tom Bridge**
- **Charles Edge**
- **Marcus Ransom**
- **Pepijn Bruienne**
- **Dr. Emily Kausalik**



MacAdmins Slack
#macsysadminconf
<http://macadmins.org>

20,541 Registered Users



If you haven't had a chance to look at the macadmin.info page I highly recommend it. There many great resources listed there and it is a collaboration between several Mac admins.

Jamf | Nation as a Jamf admin will always be dear to my heart as well. However Mac admins of any solution can gain benefit from the different postings about everyday Mac issues.

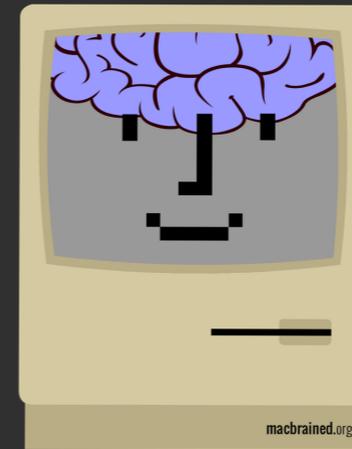
Website: macbrained.org

Twitter: [@macbrained](https://twitter.com/macbrained)

Facebook Group: [facebook.com/groups/
macbrained](https://facebook.com/groups/macbrained)

Facebook Page: facebook.com/macbrained.org

MacAdmins Slack: [#macbrained](https://slack.com)



Last but not least, Meetups. On the previous slide I mentioned Mac admins dot info. This site provides a list of some meetups. I'm particularly fond of the Mac admin group I've had a part in running with @JasonMiller and @StephanieSeago. As the fable goes one dreary SF summer day at MacIT while talking with friends we live right next to but never see we started to discuss issues we had in our environments and how we solved them. And it started to be clear we were all wasting each others time by not openly sharing. If Conferences are far between and can be quite costly. So we saw the opportunity to start meeting locally. And so we met on a little yellow school bus that we were able to rent in SF as office space. Since then we've had many helping hands to keep the group growing and are proud to have added many chapters across the world this year. Be sure to check us out.

Mentioned Tools

Pashua - <https://www.bluem.net/en/projects/pashua/>

Platypus - <https://sveinbjorn.org/platypus>

cocoaDialog - <https://cocoadialog.com>

cocoaDialog Examples - <https://bit.ly/2lmoKOO>

jamf - <https://www.jamf.com>

Munki - <https://www.munki.org>

SAL - <https://github.com/salopensource>

Munki-In-A-Box - <https://github.com/tbridge/munki-in-a-box>

Great Resources

MacMule - <https://macmule.com>

MAC ADMIN INFO - <http://macadmin.info>

MacAdmins Slack - <http://macadmins.org>

MacAdmins Podcast - <https://podcast.macadmins.org>

JAMF Nation - <https://jamfnation.jamf.com>

Simple Git Guide - <http://rogerdudler.github.io/git-guide/>

Krypted - <http://krypted.com>

Der Flounder - <http://derflounder.wordpress.com>

Rich Trouton's GitHub - <https://github.com/rtrouton>



My wife and I consider ourselves lucky to work for the particular companies that we do. Stephanie works for one of the most highly regarded coronary care companies in the world whose medical devices we have seen save the lives of our family members first hand - no joke. My uncle is alive today after a major heart attack thanks to a stent her company manufactured.

Personally I have the privilege of seeing the advancement in the fights against many terrible illnesses first hand, but when a dear family friend was diagnosed with a specific form of breast cancer and my company had a very targeted and very expensive drug for just that cancer, I was so thankful to be able to connect her to the resources within my company to get her access to that drug and knock her cancer into remission quickly.

In the last year, we've been face-to-face with a disease we've read about and dreaded - Alzheimer's. Our grandmother was diagnosed with this horrible affliction in February of this year after a long period of decline and questions. I've taken on the role as caretaker for this wonderful woman as I've watched her fight a losing battle to retain a lifetime of memories and independence. More research is needed, no cure is yet in sight and of course more research needs funding. To this day there is no test that can 100% diagnose a person has Alzheimers until after they die. This makes research that much harder and costly. I urge you to consider a donation to