jamf

The Guide to Open-Source Apps and Jamf Pro

Sure, it's entirely possible to manage a complex Apple device ecosystem exclusively using the Jamf platform.

But why stop there? Every organization is unique, and every Apple admin has their own skills and needs. Why *not* make your Jamf instance fit like a glove?

The judicious use of open-source code and scripts can speed up and automate many tasks, as well as allowing for increased flexibility. Simply put, open-source apps can simplify your day.

Many Mac admins incorporate open-source code and scripts into their workflows to save time, customize to their own employees and add their own touch. They can provide useful workflows or accomplish a myriad of tasks more easily than by going in through the web-based Jamf interface alone.

How to find open source apps

The most important source of information for which open source apps are the most useful? Other Jamf admins. Follow blogs of smart admins who share their stuff and see what they recommend. Simply google 'open source Jamf apps' and follow your nose.

But the best place to find other Mac admins (and to search archives for keywords if you want to solve a specific problem) is **Jamf Nation**: the largest Apple IT management community in the world. It's free, it's voluminous, and Mac admins are always eager to help each other solve puzzles.

How to choose an open-source app

You doubtless already know the three main places to go for open-source code: github.com, bitbucket.org and gitlab.com. For a place to find Jamf-specific code, you can visit **https://github.com/jamf**.

But once you get there, how do you decide which app is stable and supported enough to use?

Let's take the **Jamf Open-Source Community** at github as an example:

Sorting by stars will pull up those open-source repositories that have been rated highly by others, which is a plus. But there's more: take a look at the activity trackers on a repository. Repositories that are active — those more recent commits — are probably maintained in a way that those without any commits for a long while are not. (If a repository has been archived, no matter how many stars it has, you don't want to use it. Trust us.)

Another thing to look for are repositories backed by larger entities like Apache or Linux, because the more people working on something means that the code will generally be of a higher quality.
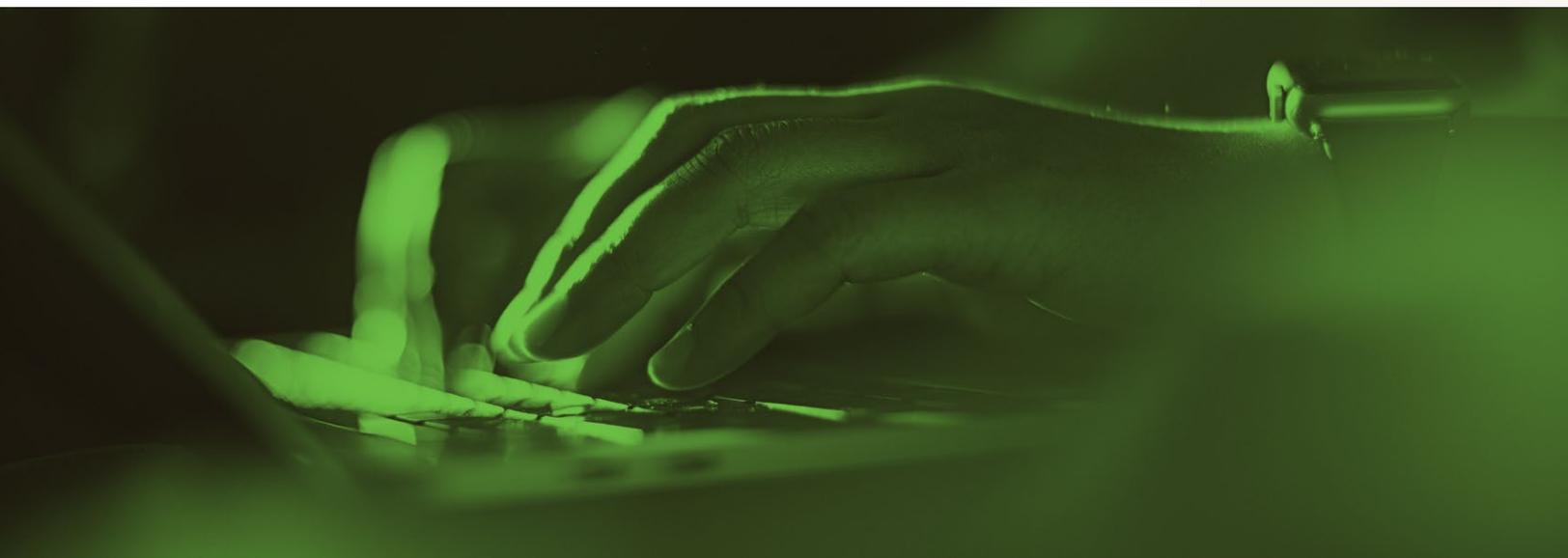
Open Source Tools from big players

Taking a look at code used or created by larger companies can also lead you to stable, useful apps.

The Mac@IBM enrollment app

IBM has its own app for assisting with enrollment. The Mac@IBM enrollment app makes setting up macOS with Jamf Pro even more intuitive for users and even easier for IT. IT admins can gather additional information about their users during setup, empower users with the ability to customize their enrollment by selecting apps or bundles of apps to install during setup, and provide users with next steps when enrollment is complete.

Munki

Jamf Pro admins can gain much from open-source software or frameworks even if they weren't built with Jamf specifically in mind. Munki, an open source project from Walt Disney Animation Studios, is a set of tools that Mac admins can use to manage software installs and uninstalls.

Munki can install software packaged in the Apple package format, and also supports Adobe deployment packages and Apple Software Updates.

autoPkg

AutoPkg, automating packaging and software distribution on macOS, is an automation framework created by a merry band of developers who keep it updated and running smoothly, and is one of the most well-trusted and heavily-used open source apps for Mac — whether with Jamf Pro or not.

It's meant to automate the tasks an admin would normally perform manually to prepare third-party software for mass deployment such as:

- Downloading or updating software

- Adding site-specific configuration and useful versioning information

- Fixing poorly-written installer scripts

- Saving these modifications back to a compressed disk image or installer package

- Importing these into a software distribution system like Munki, Jamf Pro, FileWave, etc.

- Customizing metadata for such a system with site-specific data and post-installation scripts

An extremely useful framework that plays nicely with others.
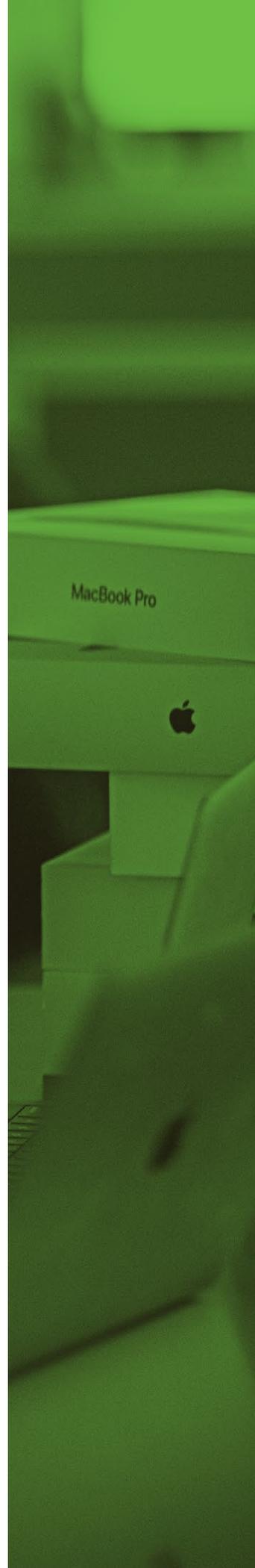
JamJAR

JamJAR, from dataJAR, is a nifty patch management helper that integrates autoPkg, Munki and Jamf for you, taking out the legwork.

It aggregates data from each app, using each product's core competency to create a scalable and modular software update framework.

A few more well-loved apps for Jamf Pro

Taking a look at code used or created by larger companies can also lead you to stable, useful apps.

The MUT   Developer: [Mike Levenick](#)

The MUT is "The unofficial, all-in-one mass update tool designed to be the perfect companion to Jamf Admins," a supporting interface for bulk records creation and updating.

> **How to use the MUT:**
>
> The MUT is particularly useful when onboarding new devices that need to be added to Jamf Pro first into the pre-stage enrollment profile. Normally, this is done one at a time manually or by adding device serial numbers to a pool when using Apple School Manager or Apple Business Manager.
>
> Because the pool includes all the devices, Mac admins must manually remove and add these to their respective profiles individually.
>
> The MUT makes short work of this by feeding in a list of the serial numbers and including the ID number of the specific profile an admin wants the numbers added to. After inputting that list, press submit and the app loops through the interactions adding each serial number to the profile — often within seconds.
>
> The MUT can also apply Jamf Pro's bulk updating feature membership modification of static groups by moving a group of devices from one profile or static group to another.
>
> Additionally, all devices managed in Jamf Pro leave records with associated data and metadata such as location of devices, assigned users and other important details specific to the organization managing the devices. MUT can help to change any or all of the values in an instant for multiple devices by attaching a CSV file with the headers and values you'd like to modify by device serial number.
>
> For example, when Jamf changed the location of 1,000 devices from our Eau Claire office to the Minneapolis office, what might have been an eight-hour manual job was made possible in 10 minutes.
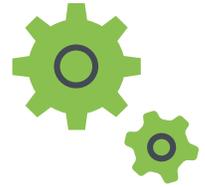
The developer defines this as "a small lightweight notification app that was designed to let your users know what's going on during a DEP enrollment. The app is focused on being very simple to use and easy to deploy."

That's a bit of an undersell. DEPNotify is a powerful tool with complex integrations that simplify device onboarding. It also adds context layers to inform users of the status of their devices during and after initial setup.

How to use DEPNotify:

Typically, Mac admins run this tool the initial setup screen. Not only does the end user get insight into what was going on during setup, DEPNotify can also complete certain tasks, such as prompting users for their cloud-based credentials to obtain access to protected information, installing applications like Office or Adobe programs (which can be lengthy to deploy), configuring settings to secure their computers and providing crucial information such as company branding and acceptable use policies (AUP). Think of it as a customizable progress bar that moves forward depending on what task is currently running and/or based on user input to constantly provide feedback while their devices are brought into compliance after being wiped or unboxed.

```
group_info->ngroups = gidsetsize;
group_info->nblocks = nblocks;
atomic_set(&group_info->usage, 1);

if (gidsetsize <= NGROUPS_SMALL)
    group_info->blocks[0] = group_info->small_block;
else {
    for (i = 0; i < nblocks; i++) {
        gid_t *b;
        b = (void *)__get_free_page(GFP_USER);
```

Ctrl+B Buy Bitcoin [Earn $10 Free]   Ctrl+I Buy AltCoins   Ctrl+P Buy More AltCoins   Ctrl+E Visual eBay

MacBook Pro

Jamf Pro API   Developer: [Jamf](#)

While technically not an app, no discussion of open-source tools would be complete without mentioning Jamf's API. It permits admins to process commands directly to the underlying database attached to their Jamf Pro instance and allows for a wealth of flexibility that goes further than the basic Jamf Pro interface.

How to use the Jamf Pro API:

You'll need some basic comfort with Terminal, as the Jamf Pro API uses a mix of universal commands to establish initial connectivity with the API itself and — once connected — using commands unique to the API to make the magic happen.

Magic is probably not too strong of a word. With the API, you can do about anything you might want to do as an admin. The limit is mostly your imagination. Furthermore, any commands you wish to execute can be written to and executed as a script to be used and reused at will without having to type it all out again repeatedly.

A few examples:

1. Resetting device passcodes

2. Enabling lost mode for devices reported missing or stolen

3. Automating onboarding processes of new devices

In each case above, the workflow would look something like:

- Connect and authenticate securely to the API

- Declare any variables, including commands, import list of device serial numbers and XML/JSON-formatted data to be passed to device records

- Process commands in an if-while loop so that each of the commands executes only against devices that match the criteria stated in variables

- Loop the commands so that each device is processed without breaking the script until the last device is processed

- Export output to human-readable format to verify against errors/issues found

And of course, developers can use the API to create their own organization-specific Jamf Pro integrations.
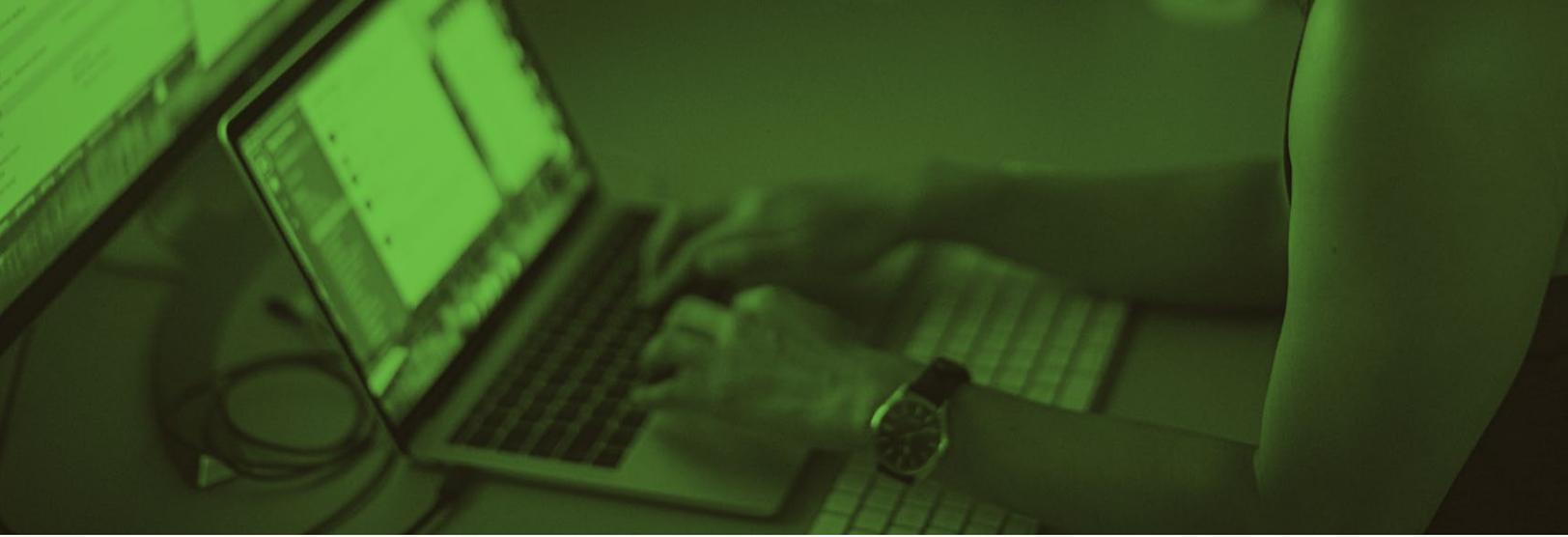
Getting started with open-source apps

If you aren't sure exactly what problem you're trying to solve, but you want to take a look around at what tools are at your disposal, **visit Jamf Nation** to search for apps or even just note what apps admins bring up in general discussions. Chances are, that app is heavily used for a reason. **Investigate the Jamf Github community and sort by stars** to see what floats to the top. You'll find policy control utilities, useful scripts for the Jamf API, FileVault and more.

There is a world of choices out there, and the sheer number of apps might feel overwhelming. In that case, start where the developers of these apps and scripts started: pay attention to your workflow and what points on it might be better automated, trip you up or take too much time.

Then, search for your problem. Chances are, someone has already solved it!

Learn more about **Jamf Pro** and the **Jamf API**.

Visit the Jamf Github community.

Join Jamf Nation!

And if you're ready to get started, try Jamf Pro for free, or contact your preferred Apple reseller.

Request Trial