

Building a Local Dropbox Alternative to Facilitate Data Deposit

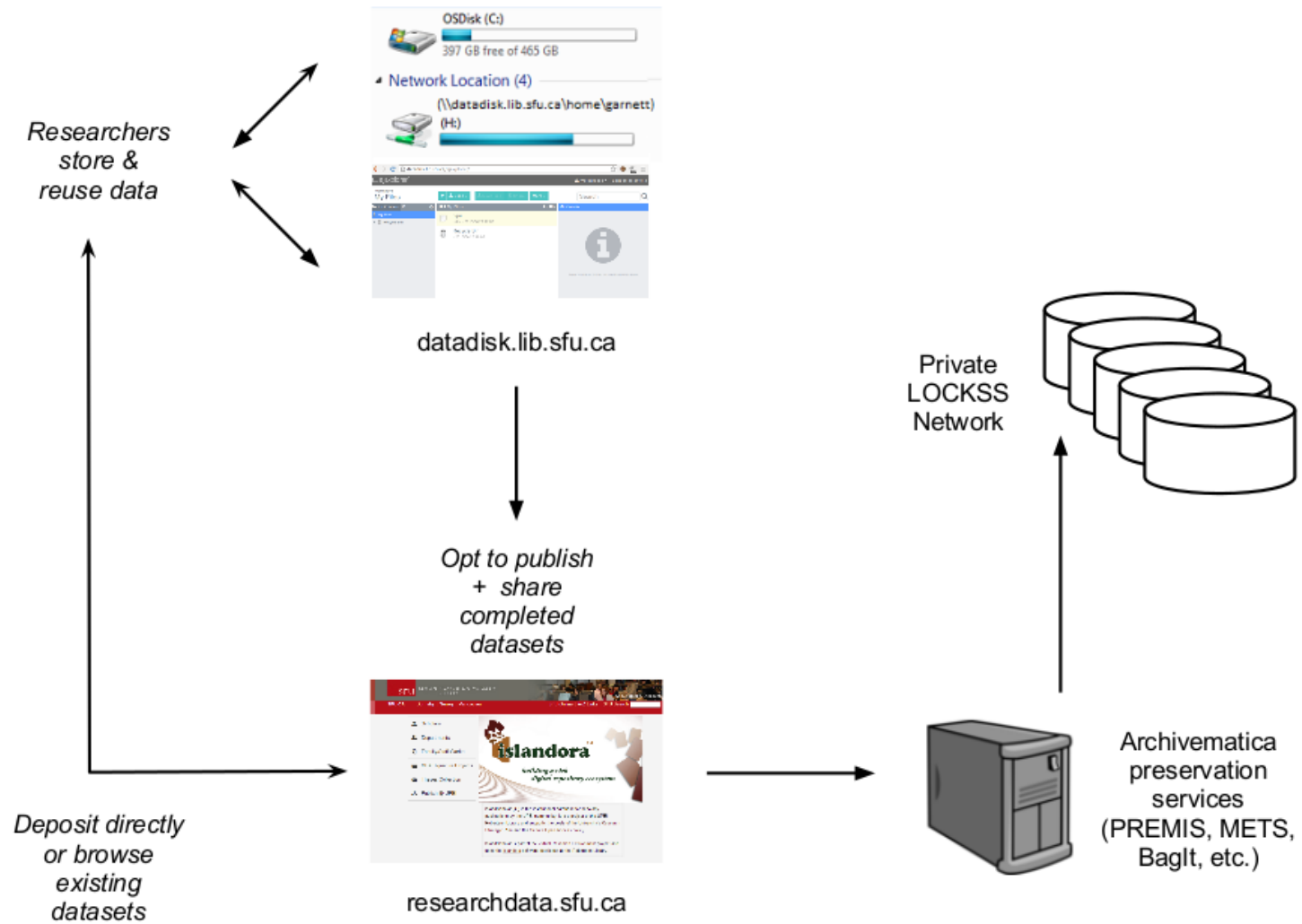
Alex Garnett

SFU Library

SFU's Data Repository

- University Projects Fund(ed)-opportunity for the library to get its research data ducks in a row
- September 2012 – 2014/2015
- Open source platforms cropping up in advance of policy precedent...

SFU Library Data Repository Services



FUNDAMENTAL ASSUMPTIONS

- People like Dropbox.
- People do not always deposit data into repositories for the sake of doing so.
- Let's kill two birds.

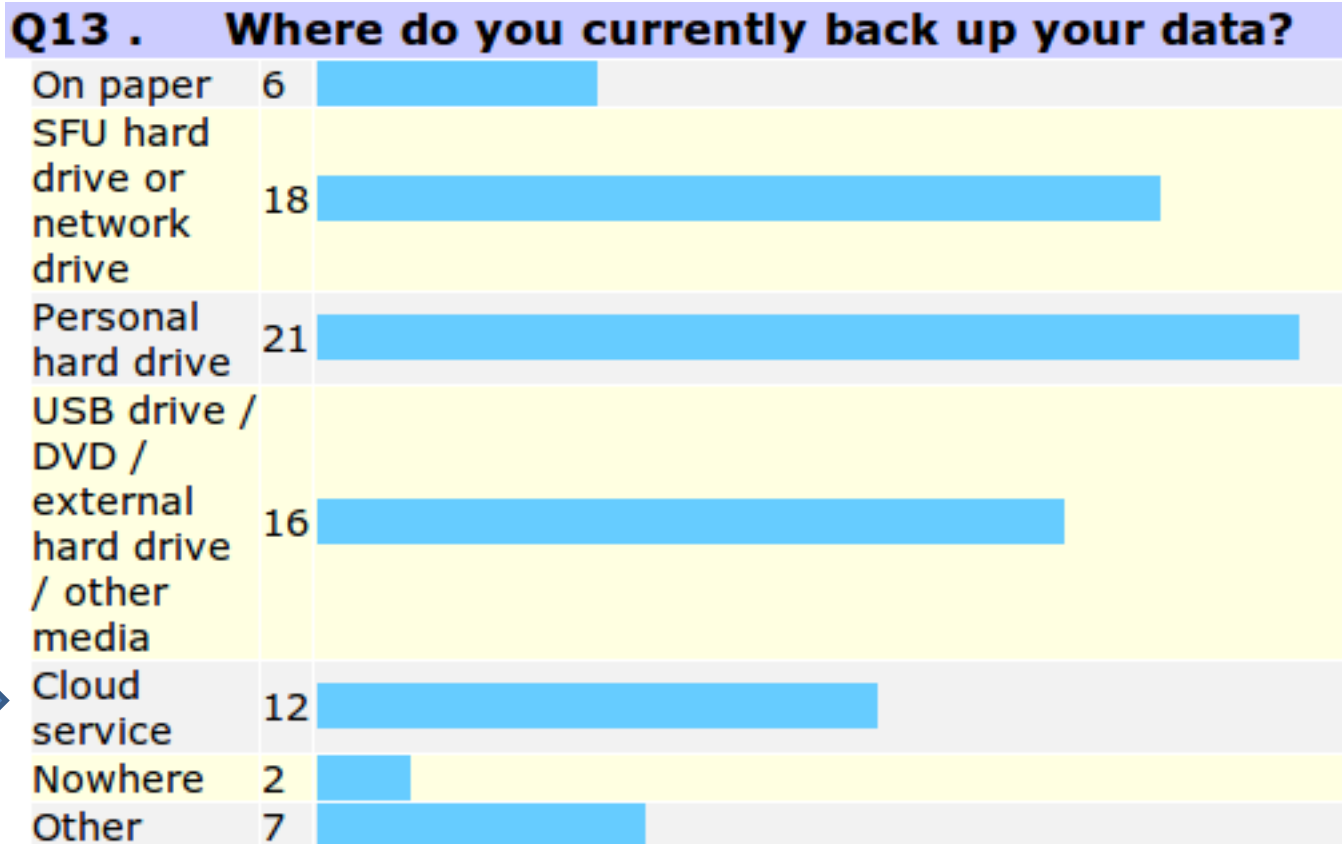
JAY BLACK'S CIO BLOG

IT SERVICES HOMEPAGE

Don't Cloud SFU Data (Revised)

February 03, 2012

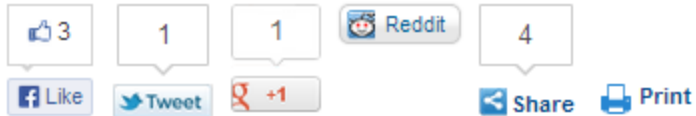
This is a revision of my earlier blog posting, with minor clarifications and additions. Thanks to all who contributed comments to the previous posting. This is now being circulated more widely, and will lead to an official "Best Practices" page on the IT Services web site.



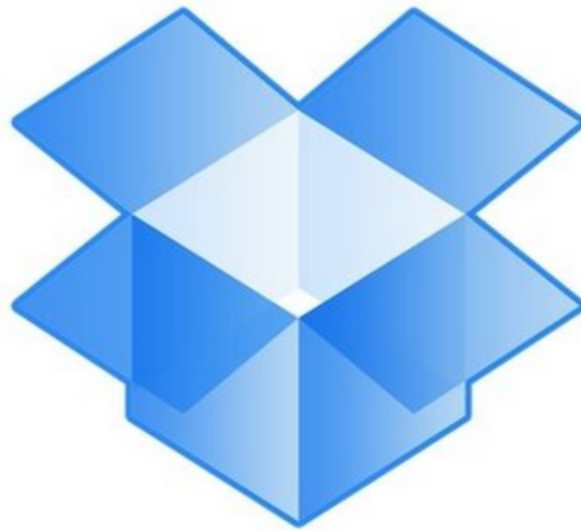
- In our faculty needs survey, 4 responders specifically mentioned Dropbox in comments. One complained he can't claim cloud expenses.

How Secure Is Dropbox?

By Marshall Honorof JULY 31, 2013 9:42 AM



1. Dropbox and PRISM

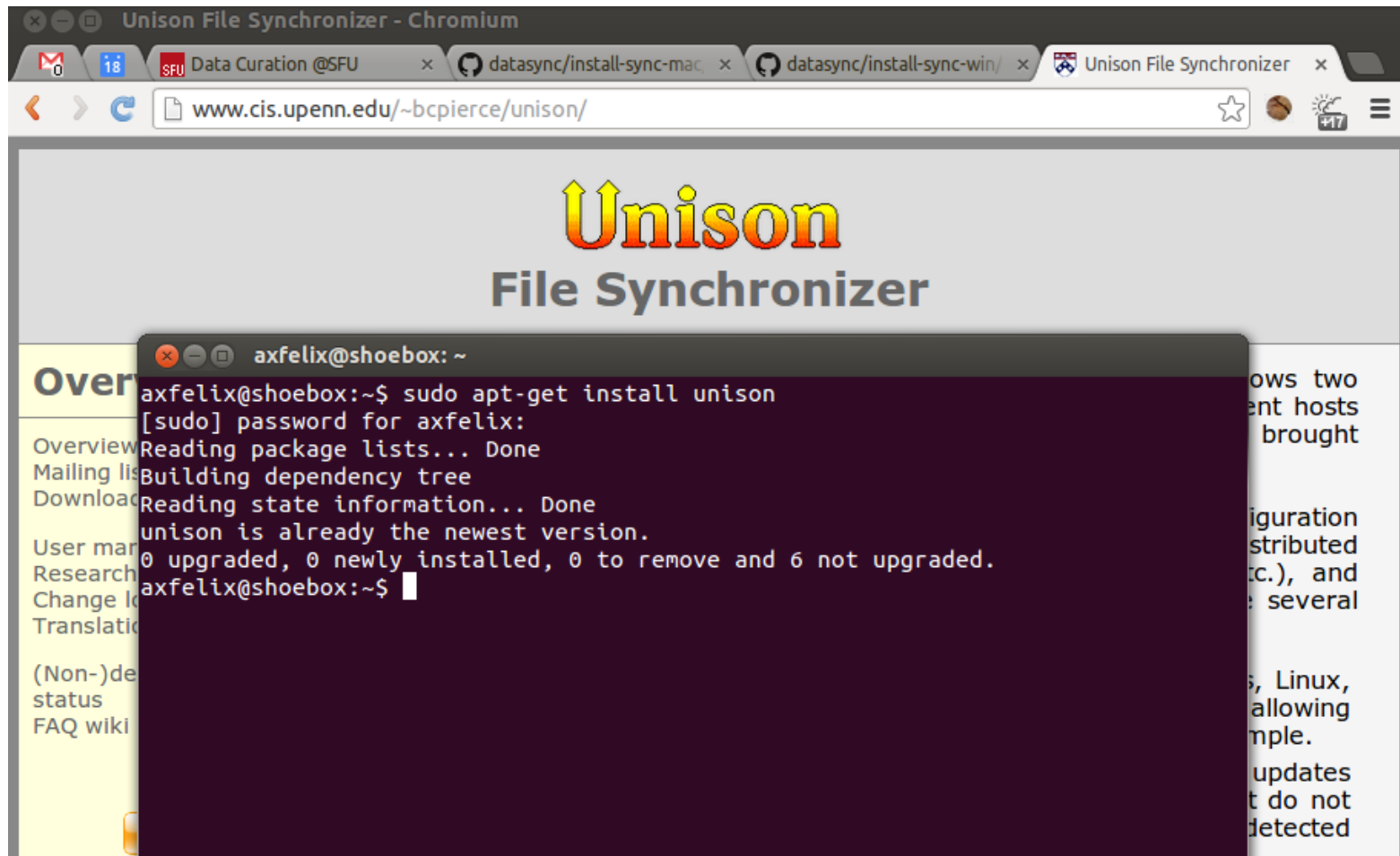


Dropbox may be the next target of the government's invasive PRISM program, which means that it's more imperative than ever to understand how secure it really is and learn how to safeguard the files you have stored there.

Whistleblower Edward Snowden revealed the U.S. National Security Agency's PRISM program in June. An internal NSA PowerPoint detailed PRISM's

plans to collect information it deems necessary for national security. Facebook, Google, Microsoft and Apple were already involved, either wittingly or unwittingly, and Dropbox was next on the

So how hard can it be to roll our own?



The image shows a web browser window displaying the Unison File Synchronizer website. The browser's address bar shows the URL `www.cis.upenn.edu/~bcpierce/unison/`. The website features the Unison logo and the text "File Synchronizer". A terminal window is overlaid on the website, showing the following command and output:

```
axfelix@shoebox: ~  
axfelix@shoebox:~$ sudo apt-get install unison  
[sudo] password for axfelix:  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
unison is already the newest version.  
0 upgraded, 0 newly installed, 0 to remove and 6 not upgraded.  
axfelix@shoebox:~$
```

The terminal window also shows a sidebar on the left with the following text:

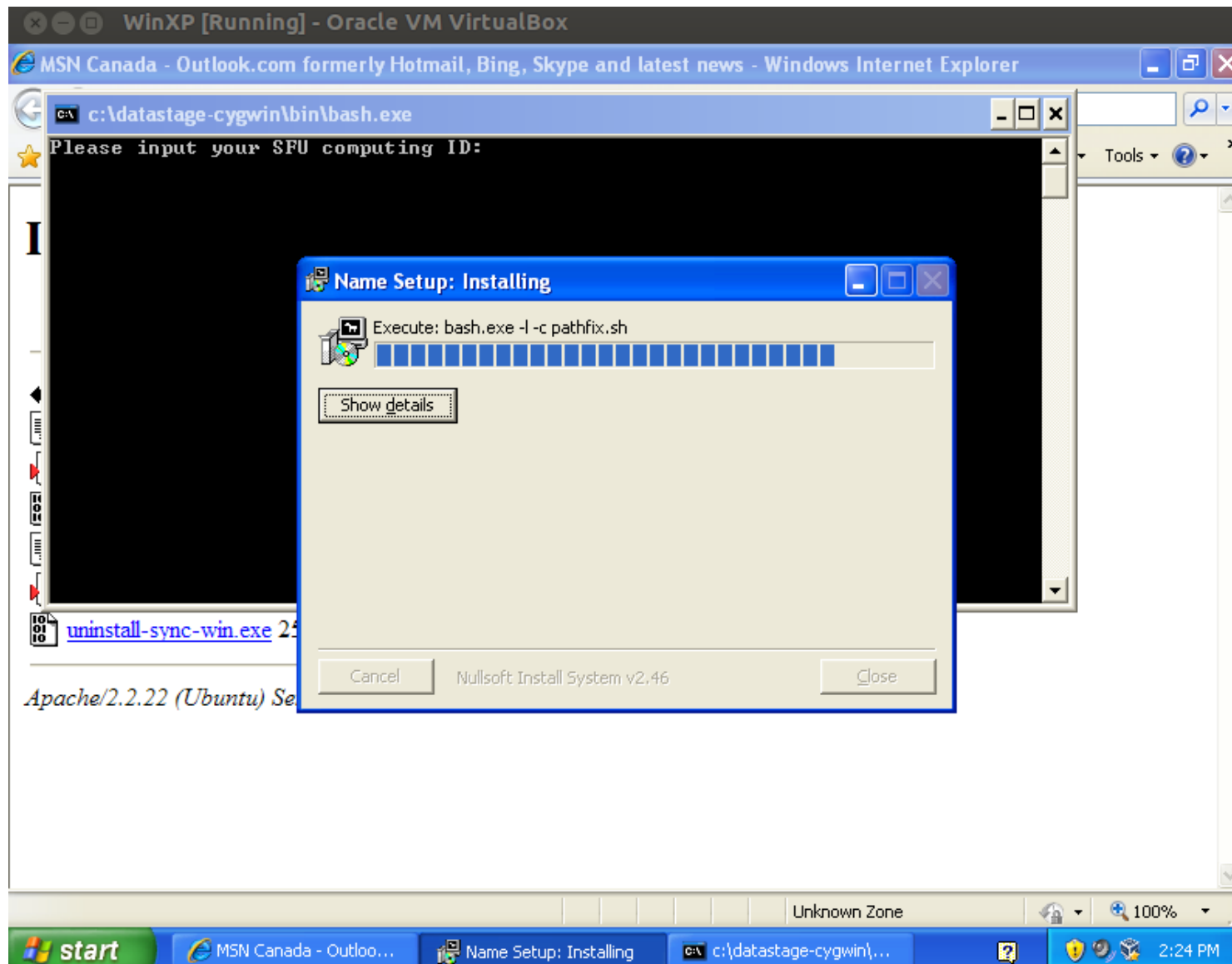
- Overview
- Mailing list
- Download
- User manual
- Research
- Change log
- Translation
- (Non-)dependencies
- status
- FAQ wiki

On the right side of the website, there is a sidebar with the following text:

- shows two
- ent hosts
- brought
- figuration
- distributed
- (c.), and
- several
- s, Linux,
- allowing
- ple.
- updates
- t do not
- detected

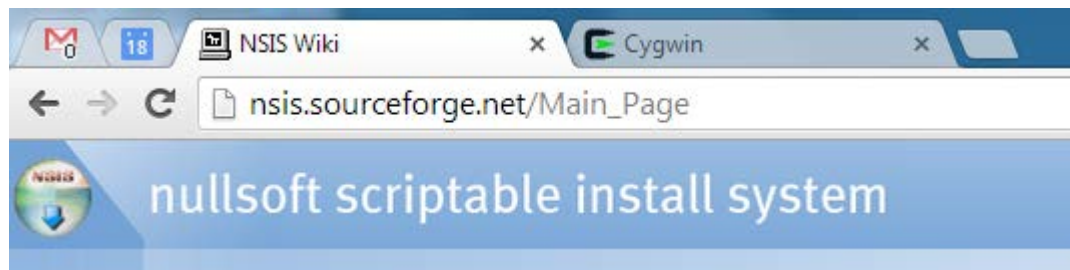
Have you ever wanted to ship a Windows application written in bash?


- ***Now you can!!***
- Yes, it sounds ridiculous, but this is actually pretty feasible.



Cross-platform architecture

- cron/ unison, rsync, ssh-copy-id, expect; tada!
- Checks every five minutes for an internet connection and whether it's already running; if not, syncs two ways.
- NSIS to wrap Cygwin scripts on Windows
- Platypus to wrap bash as .app on OSX



 **Sveinbjorn Thordarson**
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Platypus

Platypus is a developer tool for the Mac OS X operating system. It creates native Mac OS X applications from interpreted scripts such as shell scripts or Perl, Ruby and Python programs. This is done by wrapping the script in an application bundle along with a native executable binary that runs the script.

Platypus makes it easy for you to share your scripts and programs with those unfamiliar with the command line interface, without any knowledge of the Mac OS X APIs -- a few clicks and you will have your own Mac OS X graphical program. Scripting your own installers, maintenance applications, login items, launchers, automations and droplets is very easy using Platypus.

Features

- Supports shell scripts, Perl, Python, PHP, Ruby, Expect, Tcl, AppleScript or any other user-specified interpreter



Issues

- NSIS and cygwin are effectively decade-old tools at this point
- Documentation for headlessly setting up a prepared set of packages and running bash scripts afterwards is pretty inconsistent/bad
- cron, however, works beautifully.

axfelix/datsync - Chromium

axfelix/datsync x Index of /datsync x AjaXplorer - /

GitHub, Inc. [US] https://github.com/axfelix/datsync

This repository Search or type a command Explore Gist Blog Help axfelix

axfelix / datsync Unwatch 1 Star 0 Fork 0

Cross-platform client installers for rolling your own local Dropbox alternative — Edit

14 commits 1 branch 0 releases 1 contributor

branch: master datsync

removed last traces of datastage naming; fixed yum install route

axfelix authored 2 months ago latest commit 07b9968858

install-sync-mac	removed last traces of datastage naming; fixed yum install route	2 months ago
install-sync-win	removed last traces of datastage naming; fixed yum install route	2 months ago
README.md	updated readme to reflect improvements	3 months ago
gpl.txt	first commit	4 months ago
install-sync-linux.sh	removed last traces of datastage naming; fixed yum install route	2 months ago
uninstall-sync-linux.sh	updated compiled version of mac installer/uninstaller	3 months ago

README.md

Client installers for a "local Dropbox" equivalent, using unison
(<http://www.cis.upenn.edu/~bcpierce/unison/>) to do the work of file synchronization. Expects that you

Code

- Issues 0
- Pull Requests 0
- Wiki
- Pulse
- Graphs
- Network
- Settings

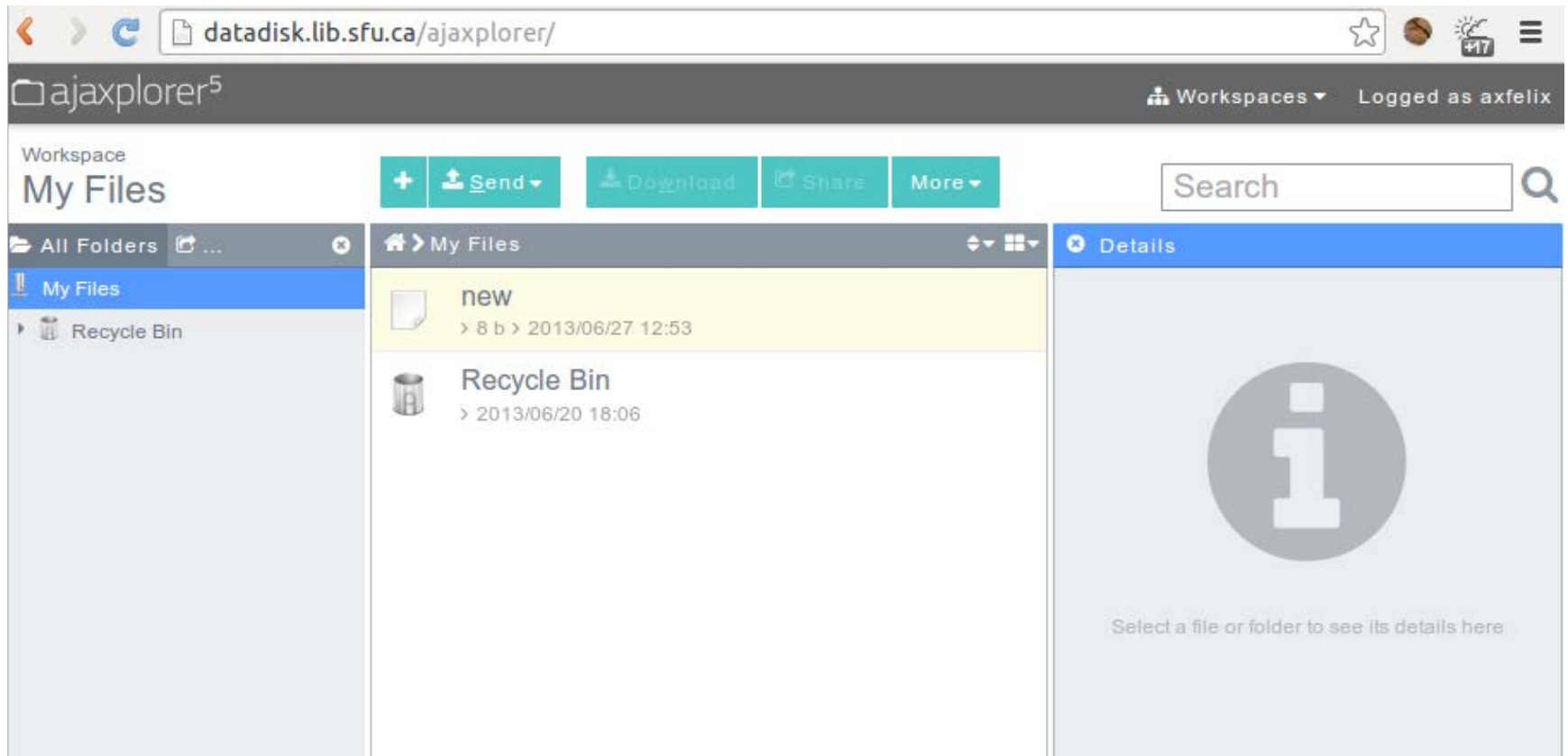
SSH clone URL

git@github.com:a

You can clone with [HTTPS](#), [SSH](#), or [Subversion](#).

Download ZIP

As for the server side...



Right-click to deposit

- We've contracted DiscoveryGarden to develop an plugin that adds an Islandora deposit hook to Ajaxplorer.
- Users prompted to fill any metadata which can't be automatically extracted.
- There is a "generic" content model for files not matching existing content models.

Some decent plugins...

The screenshot shows a web browser window with the URL `ajaxplorer.info/plugins/meta/git/`. The page header includes the Ajaxplorer 5 logo and navigation links for PRODUCT, DOWNLOAD, FORUM, DOCS, and CONTRIBUTION. Below the header is a search bar with the text "Enter search term here." The main content area is titled "Plugins > meta > git" and features a sidebar with a list of plugin categories: Core | Contributed, Core plugins, Ajaxplorer Main Options, Configurations Management, Uploaders Options, MetaStores Options, and Metadata Handlers. The main content area displays the "Git-based Versioning" plugin details, including an "Identity Card" section with a table of information.

ajaxplorer⁵ PRODUCT DOWNLOAD FORUM DOCS CONTRIBUTION

Open Source File Sharing Enter search term here.

All plugins Plugins > meta > git

Core | Contributed

- Core plugins
- Ajaxplorer Main Options
- Configurations Management
- Uploaders Options
- MetaStores Options
- Metadata Handlers

Git-based Versioning

Identity Card

Status	Core
Plugin Label	Git-based Versioning
Short Description	Keep tracks of all files modifications using a local Git repository

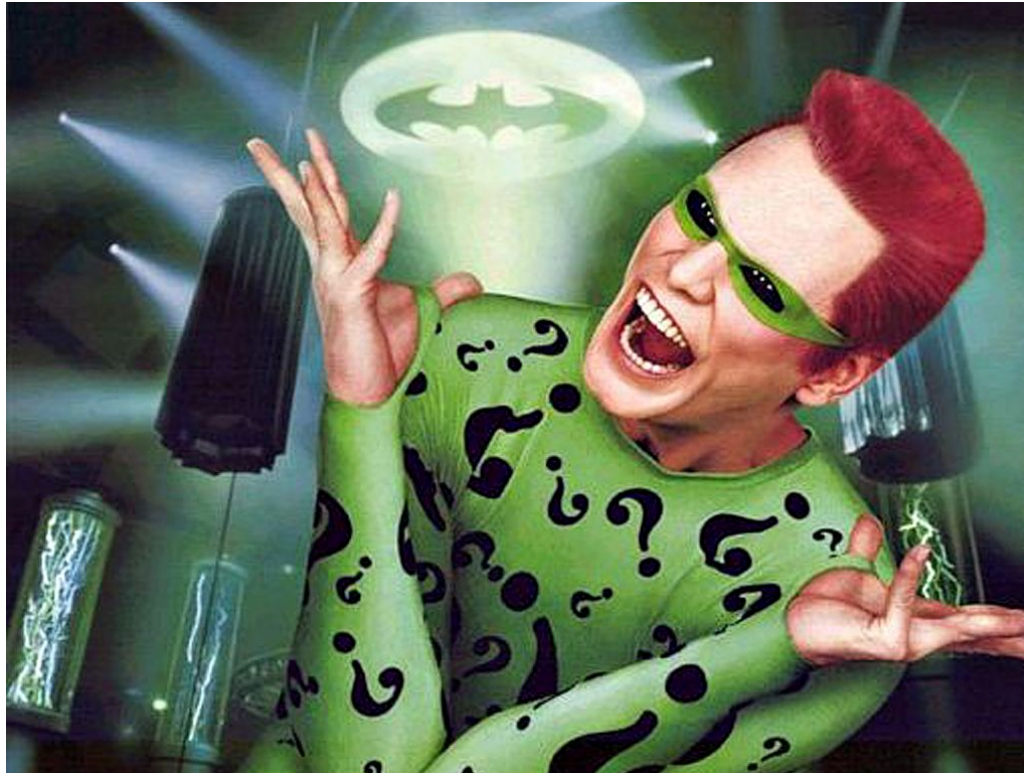
Testing

- So far, not much uptake from faculty... but the Islandora side isn't ready yet.
- Right now, it's just other-Dropbox – and we seem to have been correct that legitimacy and free space aren't enough for migration.
- Whole kit and kaboodle should be launching by the end of the year.

Issues, Concerns, Etc.

- Why not OwnCloud? Two main reasons:
 - Still haven't heard from any users
 - It's fairly heavyweight (has its own Mail and Calendar), and while we could just as well ignore the rest ... I didn't want to bolt it onto an already-complex Islandora and Archivemata pipeline.

Questions?



- <http://github.com/axfelix/datasync>