

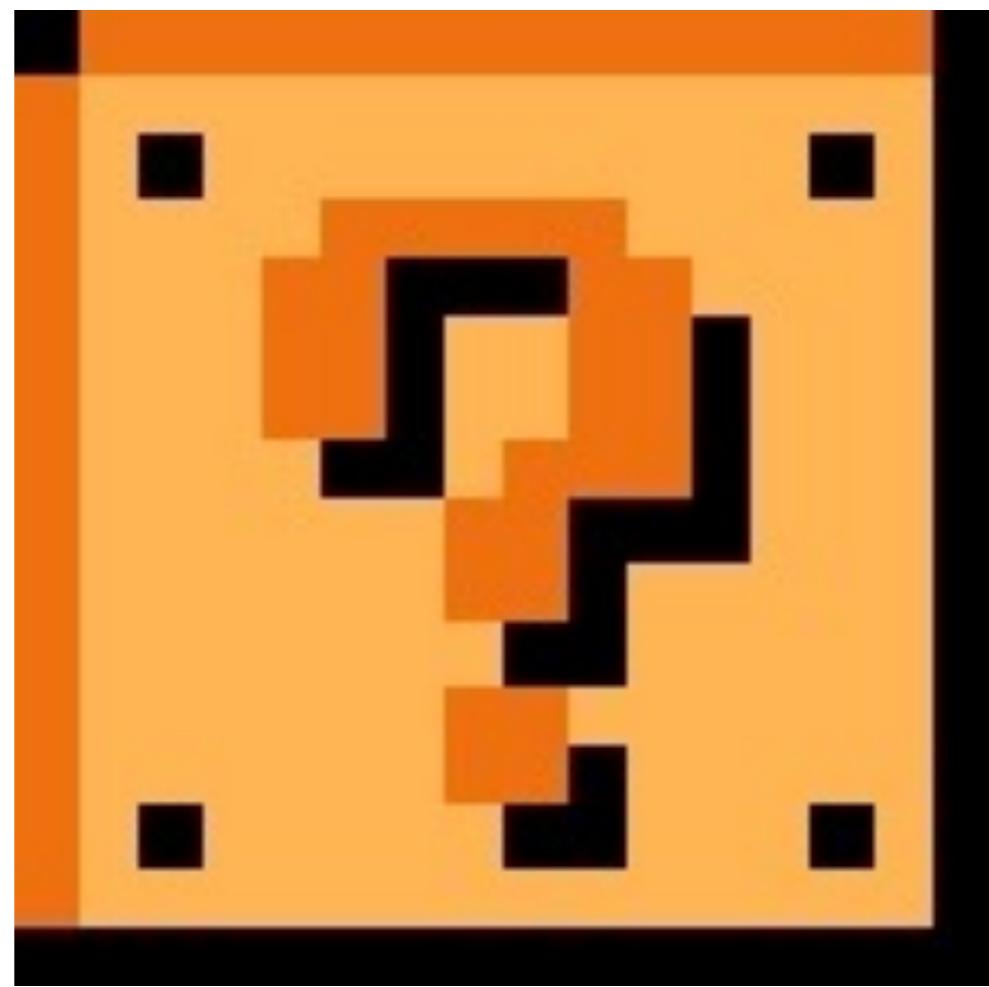
Taking your ball
and going home;
building
your own secure storage
space that mirrors
Dropbox's functionality

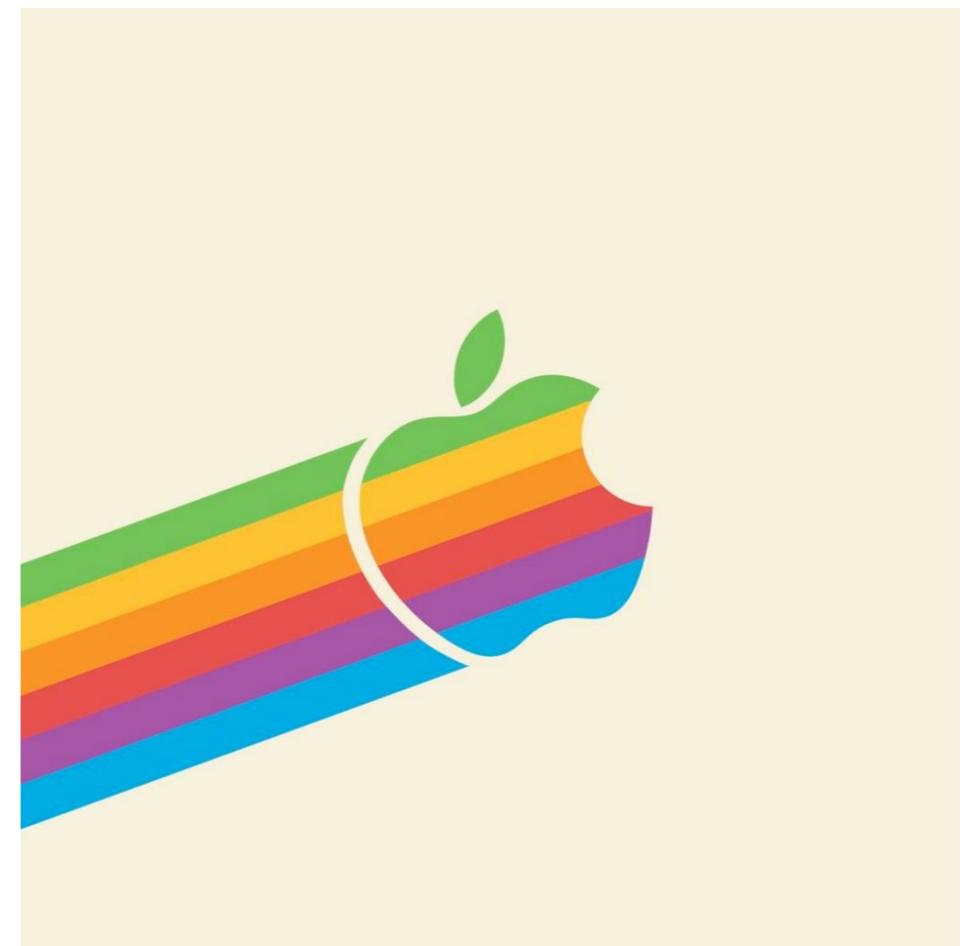


Phil Cryer (@fak3r)
open source technologist
DEFCON 19 - August 2011

```
$ echo O'HAI! I am `whoami`  
O'HAI! I am phil
```

```
$ echo AKA `alias | grep phil`  
AKA phil='fak3r'
```







computer |kəm'pyootər|

noun

an electronic device for storing and processing data, typically in binary form, according to instructions given to it in a variable program.

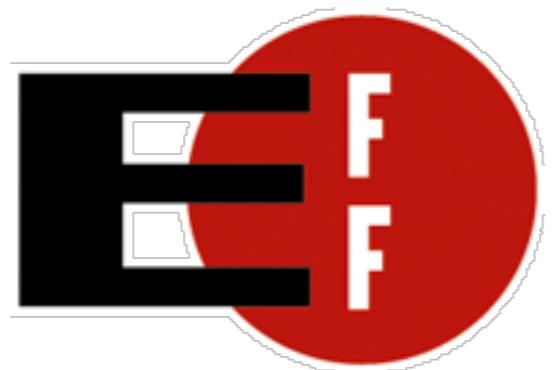
- a person who makes calculations, esp. with a calculating machine.







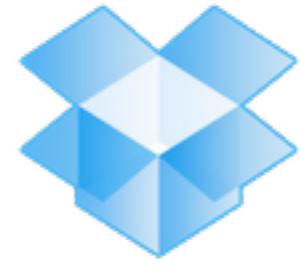




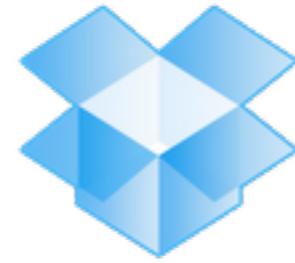
- Now working for non-profit
- Linux systems administrator
- Distributed storage, cloud computing
- Open source technologist
- Civil liberties activist
- Security researcher

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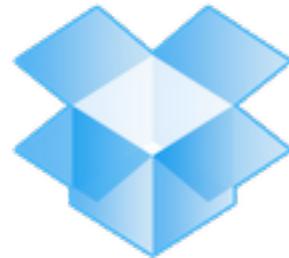


Dropbox



Dropbox

Always have your stuff, wherever you are.



Dropbox

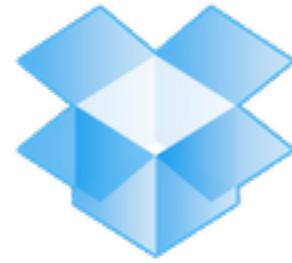
Brief history

2007 June - founded, receives series A funding

2007 September - receives \$1.2M in seed funding (Y Combinator)

2007 October - receives \$6M in Series A funding

2008 Fall - secures \$7.2M Series A funding (Sequoia Capital, Accel Partners)

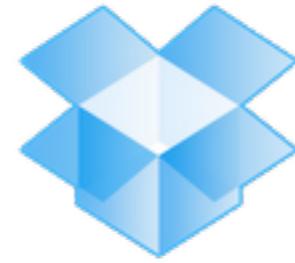


Dropbox

Dropbox enables people to sync files and media across platforms and devices, in order to have them available from any location.

The service also allows people to easily and quickly share files with others.

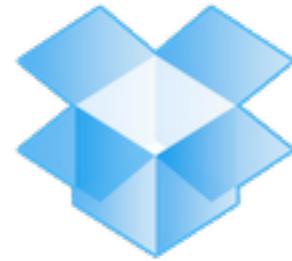
Dropbox provides users with 2 GB of space for free, and they can pay for more.



Dropbox

People use Dropbox for personal storage, file syncing between machines, and group collaboration on projects.

They have desktop software for the usual OSs (Mac OSX, Linux and Windows) and mobile access, that makes things run smoothly.



Dropbox

Current growth

2009 2 millions users

2010 4 million users

2011 April - Dropbox claims to have **25 million users** of its free service

“Today, Dropbox has 25 million users and 200 million files are “saved” daily, and more than 1 million every five minutes.”

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Dropbox Hits 25 Millions Users, 200 Million Files Per Day

Michael Arrington  770  +1 1  2,272  1,370 37 Comments

 **Dropbox**

Dropbox will announce a number of milestones on Monday morning, we've learned. The file backup and sharing service was [founded in 2007](#) by [Drew Houston](#) and [Arash Ferdowsi](#).

It was in one of the early Y Combinator classes, now has 25 million users and 200 million files are “saved” daily, and more than 1 million every five minutes.

That's impressive growth from the [4 million users](#) the company had a year ago (they had [two million](#) in late 2009). Dropbox enables people to sync files and media across platforms and devices, in order to have them available from any location. The service also allows people to easily and quickly share files with others. Dropbox provides users with 2 GB of space for free, and they can [pay for more](#).

People use dropbox for personal storage, file syncing between machines, and group collaboration on projects. They have desktop software for the usual OSs, and mobile access, that makes things run smoothly.

They are much more tight lipped on revenue and profitability, though. Guesses range all over the place, but the company is certainly efficient with bandwidth and storage. They likely only upload unique files. Common files, like songs and movies, aren't re-uploaded repeatedly.

Got a tip? Building a startup? [Tell us](#)

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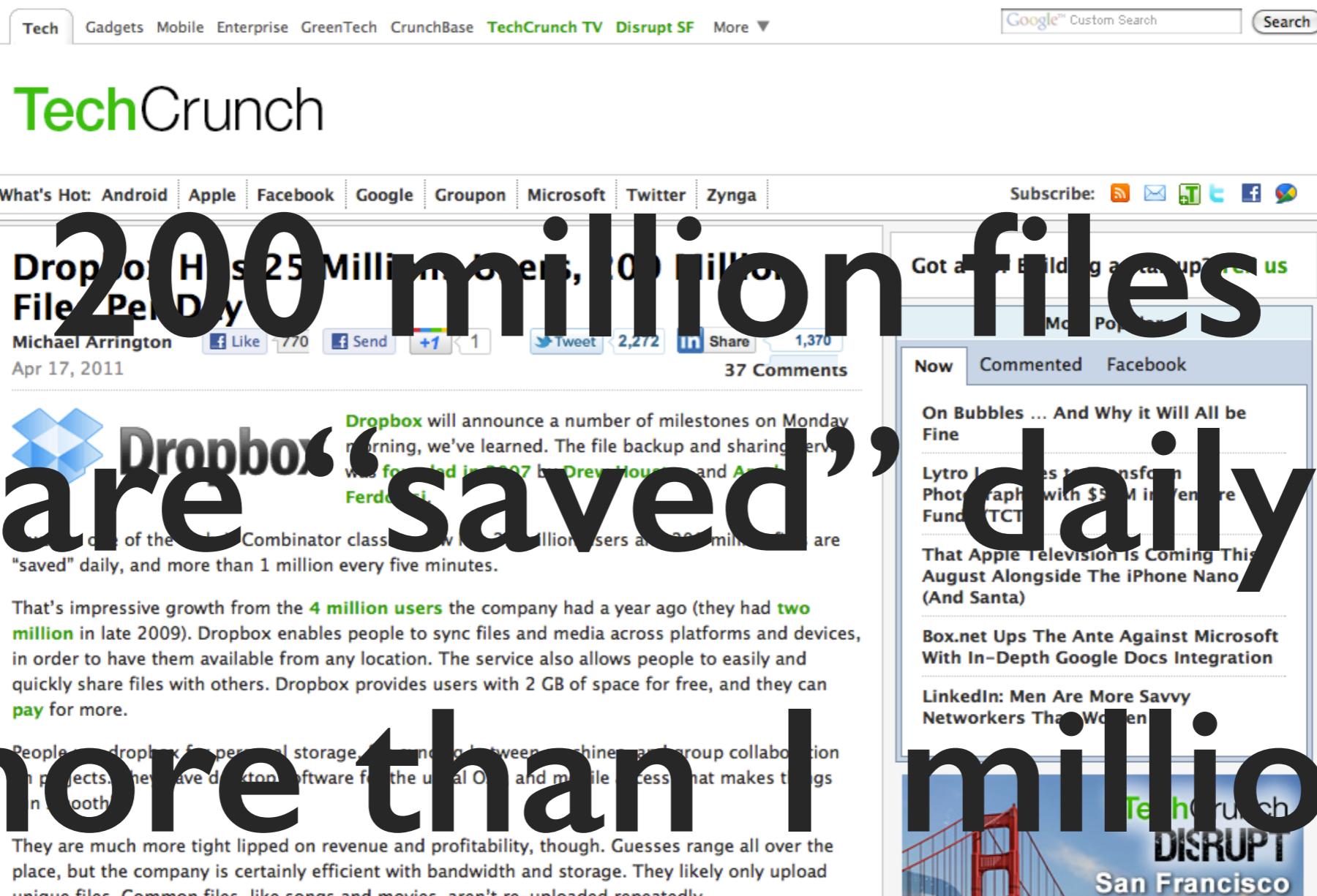
[That Apple Television Is Coming This August Alongside The iPhone Nano \(And Santa\)](#)

[Box.net Ups The Ante Against Microsoft With In-Depth Google Docs Integration](#)

[LinkedIn: Men Are More Savvy Networkers Than Women](#)



25 million users



The image shows a screenshot of a TechCrunch article. The main headline is "Dropbox Hits 25 Million Users, 200 Million Files Per Day" by Michael Arrington, dated April 17, 2011. The article discusses Dropbox's growth, mentioning it was founded in 2007 by Drew Houston and Arash Ferdowsi. It highlights that over 25 million users and 200 million files are "saved" daily, with more than 1 million uploaded every five minutes. The text also notes the company's impressive growth from 4 million users a year ago to two million in late 2009. The sidebar features links to other TechCrunch articles about bubbles, Lytro cameras, Apple TV, Box.net, and LinkedIn.

200 million files

are “saved” daily

more than 1 million

every five minutes

25 million users

The screenshot shows a TechCrunch article titled "Dropbox Hits 25 Million Users, 200 Million Files Per Day" by Michael Arrington, published on April 17, 2011. The article discusses Dropbox's growth, mentioning it was founded in 2007 by Drew Houston and Arash Ferdowsi. It highlights that the service has over 25 million users and 200 million files, with more than 1 million files being "saved" daily and over 200 million files uploaded every five minutes. The TechCrunch header includes links for "Tech", "Gadgets", "Mobile", "Enterprise", "GreenTech", "CrunchBase", "TechCrunch TV", "Disrupt SF", and "More". The sidebar features a "Google Custom Search" bar and links for "Subscribe" and social media sharing.

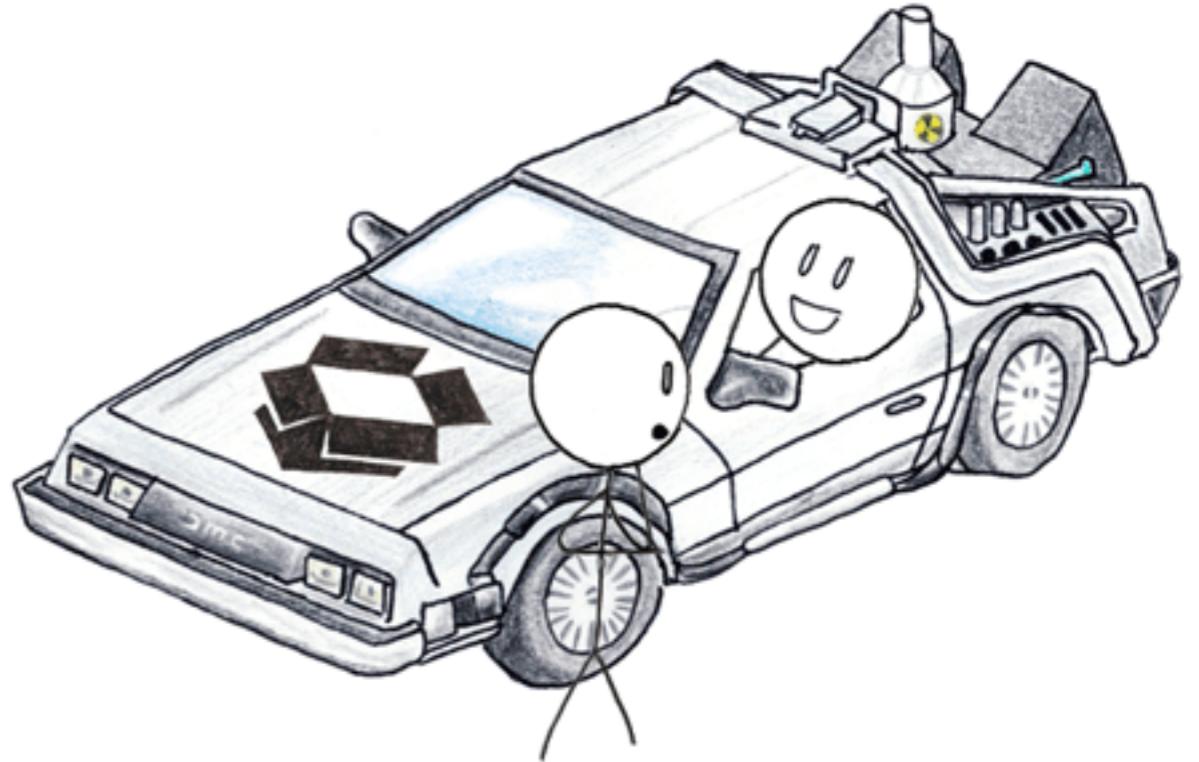
200 million files

are “saved” daily

more than 1 million

every five minutes

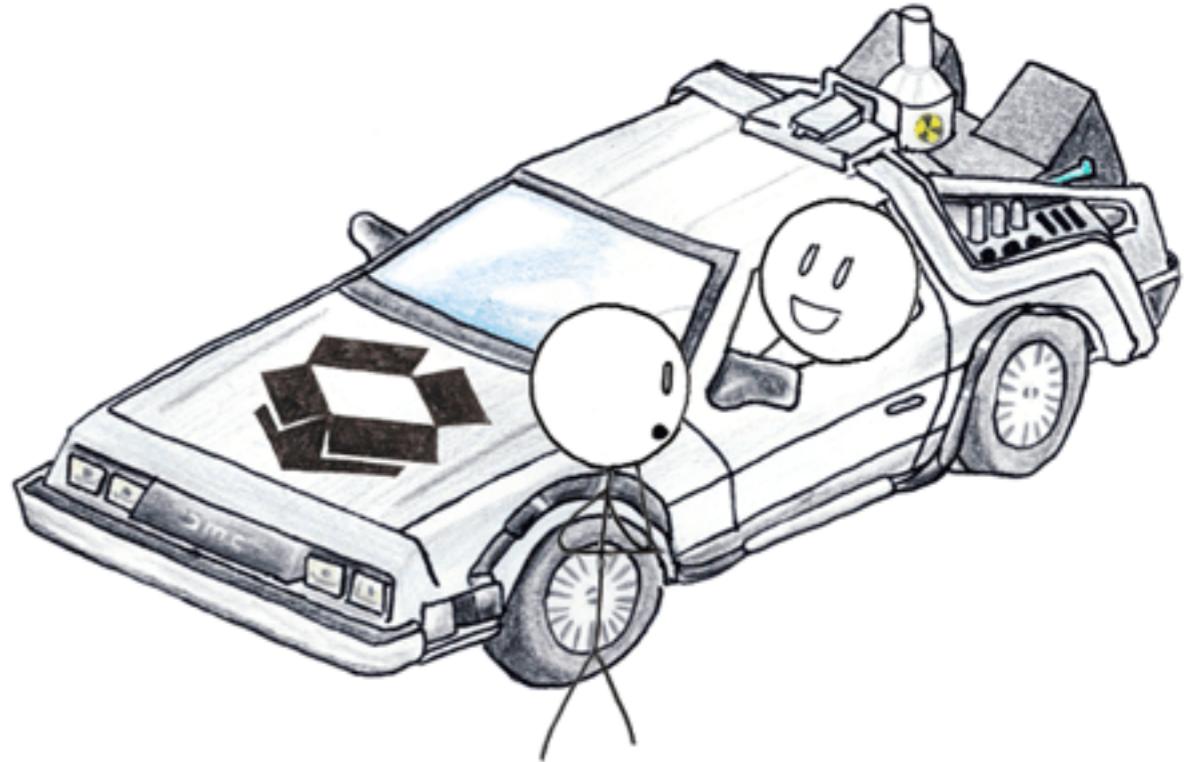
So, a for-profit company offers a free app, with free data storage... what's to worry about?



Dropbox

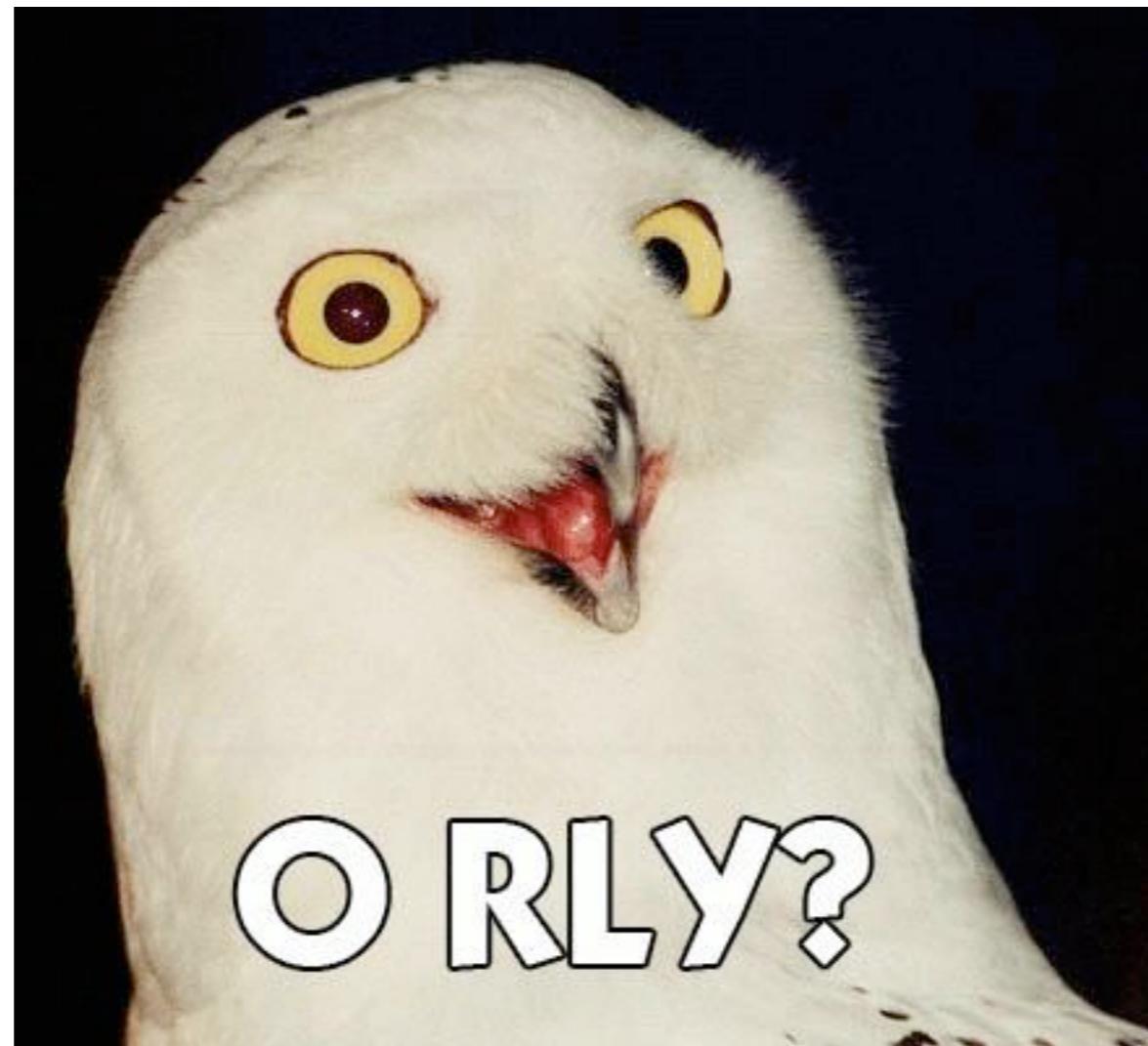
We know Dropbox is secure because Dropbox says so:

- “Your files are always available from the secure Dropbox website” (secure sounds good)
- “All transmission of file data occurs over an encrypted channel (SSL)” (wow, that sounds good too!)
- “All files stored on Dropbox are encrypted (AES-256)” (dude, that's “military grade” encryption! That's gotta be good!)
- “...protects your files without you needing to think about it” (How can you argue with that?)
- “Your stuff is safe” (O'RLY?)



We know Dropbox is secure because Dropbox says so:

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- “...protects your files without you needing to think about it” (How can you argue with that?)
- “Your stuff is safe” (...)



Meanwhile, security researchers have turned up evidence otherwise.

How Dropbox sacrifices user privacy for cost savings

“While the decision to deduplicate data has probably saved the company quite a bit of storage space and bandwidth, it has significant flaws which are particularly troubling given the statements made by the company on its security and privacy page.” Christopher Soghoian

(files hashes are checked before upload, bandwidth testing shows that files aren’t transferred if they exist (elsewhere) on the servers)

slight paranoia

Analysis and opinion by Christopher Soghoian, security and privacy researcher.

TUESDAY, APRIL 12, 2011

How Dropbox sacrifices user privacy for cost savings

Note: This flaw is different than the authentication flaw in Dropbox that Derek Newton recently published.

Summary

Dropbox, the popular cloud based backup service [deduplicates](#) the files that its users have stored online. This means that if two different users store the same file in their respective accounts, Dropbox will only actually store a single copy of the file on its servers.

The service [tells users](#) that it "uses the same secure methods as banks and the military to send and store your data" and that "[a]ll files stored on Dropbox servers are encrypted (AES-256) and are inaccessible without your account password." However, the company does in fact have access to the unencrypted data (if it didn't, it wouldn't be able to detect duplicate data across different accounts).

This bandwidth and disk storage design tweak creates an easily observable [side channel](#) through which a single bit of data (whether any particular file is already stored by one or more

Christopher Soghoian is a Washington, DC based Graduate Fellow at the Center for Applied Cybersecurity Research, and a Ph.D. Candidate in the School of Informatics and Computing at Indiana University.

His research is focused on the topic of online privacy. This includes both consumer issues, such as online tracking as well as government surveillance.

Click [here](#) to visit his home page.

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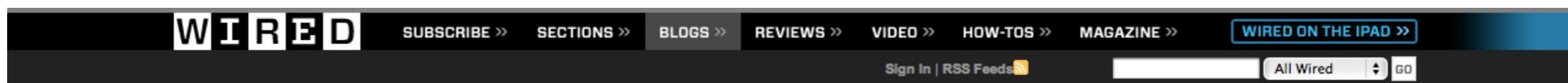
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BLOG ARCHIVE

Dropbox Lied to Users About Data Security, Complaint to FTC Alleges

Christopher Soghoian published data last month showing that **Dropbox could indeed see the contents of files**, putting users at risk of government searches, rogue Dropbox employees, and even companies trying to bring mass copyright-infringement suits.

Soghoian, who spent a year working at the FTC, charges [...] “(Dropbox) has and continues to make **deceptive statements to consumers** regarding the extent to which it protects and encrypts their data,” which amounts to a deceptive trade practice that can be investigated by the FTC.



THREAT LEVEL

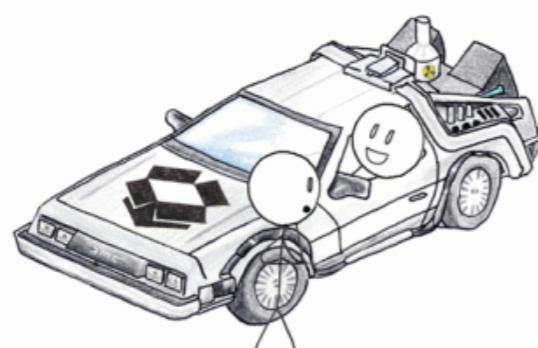
PRIVACY, CRIME AND SECURITY ONLINE

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NEXT POST

Dropbox Lied to Users About Data Security, Complaint to FTC Alleges

By Ryan Singel May 13, 2011 | 4:54 pm | Categories: [Crypto](#), [Cybersecurity](#)



Your stuff is safe

Dropbox protects your files without you needing to think about it.

- Dropbox keeps a one-month history of your work.
- Any changes can be undone, and files can be undeleted.
- All transmission of file data occurs over an encrypted channel (SSL).
- All files stored on Dropbox are encrypted (AES-256).

 Download Dropbox



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BOOKS



Dropbox authentication: insecure by design

“Here’s the problem: the config.db file is completely portable and is *not* tied to the system in any way. This means that if you gain access to a person’s config.db file (or just the host_id), you gain complete access to the person’s Dropbox until such time that the person removes the host from the list of linked devices via the Dropbox web interface.” Derek Newton

The screenshot shows a dark-themed website for 'DEREK NEWTON | Information Security Insights'. The navigation bar includes links for HOME, ABOUT, FORENSIC TOOLS, and RESOURCES. The main content area features a heading 'Dropbox authentication: insecure by design' with a subtext about the security implications of the config.db file. A sidebar on the right lists various forensic categories with their counts, such as Active Directory (1), Application Security (1), and Incident Response (6). The footer contains a link to the original article: <http://dereknewton.com/2011/04/dropbox-authentication-static-host-ids>.

« Getting Things Done in the InfoSec world... Forensic artifacts: Dropbox »

Dropbox authentication: insecure by design

For the past several days I have been focused on understanding the inner workings of several of the popular file synchronization tools with the purpose of finding useful forensics-related artifacts that may be left on a system as a result of using these tools. Given the prevalence of Dropbox, I decided that it would be one of the first synchronization tools that I would analyze, and while working to better understand it I came across some interesting security related findings. The basis for this finding has actually been briefly discussed in a number of forum posts in Dropbox’s official forum ([here](#) and [here](#)), but it doesn’t quite seem that people understand the significance of the way Dropbox is handling authentication. So, I’m taking a brief break in my forensics-artifacts research, to try to shed some light about what appears to be going on from an authentication standpoint and the significant security implications that the present implementation of Dropbox brings to the table.

To fully understand the security implications, you need to understand how Dropbox works (for those of you that aren’t familiar with what Dropbox is - a brief feature primer can be found on their [official website](#)). Dropbox’s primary feature is the ability to sync files across systems and devices that you own, automatically. In order to support this syncing process, a client (the Dropbox client) is installed on a system that you wish to participate in this synchronization. At the end of the installation process the user is prompted to enter their Dropbox credentials (or create a new account) and then the Dropbox folder on your local system syncs up with the Dropbox “cloud.” The client runs constantly looking for new changes locally in your designated Dropbox folder and/or in the cloud and syncs as required; there are versions that support a number of operating systems (Windows, Mac, and Linux) as well as a number of portable devices (iOS, Android, etc). However, given my research is focusing on the use of Dropbox on a Windows system, the information I’ll be providing is Windows specific (but should be applicable on any platform).

Under Windows, Dropbox stores configuration data, file/directory listings, hashes, etc in a number of SQLite database files located in %APPDATA%\Dropbox. We’re going to focus on the primary database relating to the client configuration: config.db. Opening config.db with

- > Active Directory (1)
- > Application Security (1)
- > Data Security (1)
- > eDiscovery (1)
- > Evidence Acquisition (4)
- > Forensics (2)
- > Incident Response (6)
- > Linux Forensics (2)
- > Malware Analysis (1)
- > Management (1)
- > Mobile Phone Forensics (1)
- > NTFS (2)
- > PowerShell (4)
- > Protection (2)

Dropbox: A Privacy Black Box

"National Security Letter authority and the impoverished “third party doctrine” in Fourth Amendment law puts cloud-user privacy on pretty weak footing. Dropbox’s policies do nothing to shore that up. It’s not alone, of course. It’s just a nice discrete example of how “the cloud” exposes your data to risks that local storage doesn’t." Jim Harper

 **THE TECHNOLOGY LIBERATION FRONT**
"The real problem is not whether machines think, but whether men do."

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JUNE 22, 2011

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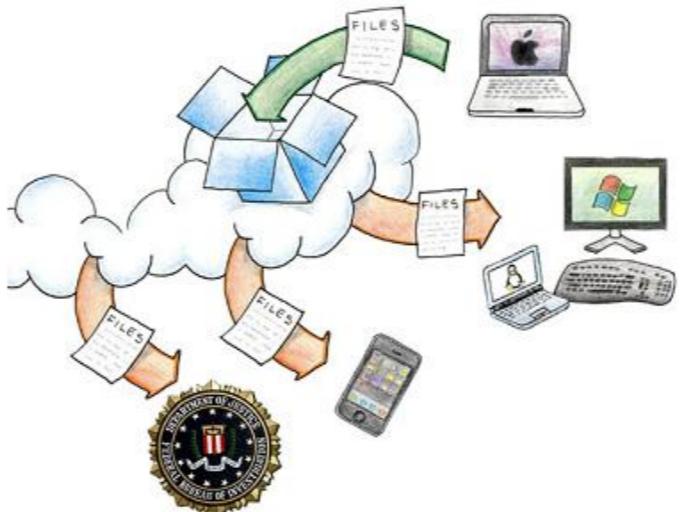
Dropbox: A Privacy Black Box

by JIM HARPER on DECEMBER 12, 2009 · 11 COMMENTS

A colleague apparently suggested that the nice people at [Dropbox](#) should email me with an invitation to use their services. The concept appears simple enough—remote storage that makes users' files available on any laptop, desktop, or phone.

I was intrigued by it because it's a discrete example of a "cloud" computing service. How do they handle some of the key privacy challenges? A [cloud over remote computing and storage](#) is the likelihood that governments will use it to discover private information with dubious legal justification, or without any at all. (Businesses likewise can rightly worry that competitors working with governments might access trade secrets.)

Well, it turns out they don't handle these challenges. Dropbox is a privacy black box.



The Technology Liberation Front is the tech policy blog dedicated to keeping politicians' hands off the 'net and everything else related to technology. [Learn more about TLF →](#)

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Schumer to DOJ: Shut down Silk Road and bitcoin

DIGITAL POLICY READING LIST

**Ok, so Dropbox has *some* privacy considerations to address,
at least it's safe and secure now...right?**

Dropbox Security Bug Made Passwords Optional For Four Hours

“This morning a post on [Pastebin](#) outlined a serious security issue that was spotted at Dropbox: for a brief period of time, the service allowed users to log into accounts using any password. In other words, you could log into someone’s account simply by typing in their email address. Given that many people entrust Dropbox with secure data (one of the service’s selling points is its security), that’s a big deal.

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Dropbox Security Bug Made Passwords Optional For Four Hours

Text Size Print E-mail Reprints

By TechCrunch.com, Published: June 20

This morning a post on [Pastebin](#) outlined a serious security issue that was spotted at Dropbox: for a brief period of time, the service allowed users to log into accounts using any password. In other words, you could log into someone’s account simply by typing in their email address. Given that many people entrust Dropbox with secure data (one of the service’s selling points is its security), that’s a big deal.

We’ve now confirmed with Dropbox that the service did have this issue yesterday — Dropbox says that it began after a code push at 1:54 PM PST yesterday and was fixed at 5:46 PM PST (they had the fix live five minutes after they discovered it). So, in total, the bug was live for around four hours.

0 Comments Weigh In Corrections?

The question now is how many people were affected. The company will be announcing that “much less than 1 percent” of users

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Mark Cutelli shared Public school teacher: 13 reasons I'm outraged - The Answer Sheet - The

Carrie

Dropbox confirms security glitch -- no password required

"Web-based storage firm Dropbox confirmed this afternoon that a programmer's error caused a temporary security breach that allowed any password to be used to access any user account. The San Francisco-based start-up attributed the security breach to a "code update" that "introduced a bug affecting our authentication mechanism." Access without passwords was possible between 1:54pm PT and 5:46pm PT yesterday, the company said." Declan McCullagh

The screenshot shows a news article from CNET News. The header features the CNET logo and navigation links for Home, Reviews, News, Downloads, Video, How To, and a search bar. Below the header, a banner for 'PRIVACY INC' is displayed, edited by Declan McCullagh, featuring a key icon and binary code.

JUNE 20, 2011 4:37 PM PDT

Dropbox confirms security glitch--no password required

by Declan McCullagh

Print E-mail

Tweet 427 +1 6 Share 38 comments

Web-based storage firm Dropbox confirmed this afternoon that a programmer's error caused a temporary security breach that allowed any password to be used to access any user account.

The San Francisco-based start-up attributed the security breach to a "code update" that "introduced a bug affecting our authentication mechanism." Access without passwords was possible between 1:54pm PT and 5:46pm PT yesterday, the company said.

"This should never have happened," Dropbox co-founder and CTO Arash Ferdowsi said in a [blog post](#). "We are scrutinizing our controls and we will be implementing additional safeguards to prevent this from happening again."

This afternoon's news is a significant embarrassment for Dropbox, which (despite not being located in Silicon Valley) [appeared](#) on a list of "20 Hot Silicon Valley Startups You Need To Watch," and which received a CNET Webware [award](#) in May 2009.

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Ok, so maybe Dropbox knows what you have, and might not be more secure than the next cloud service provider, at least it has security to protect information about your personal data usage...right?

Dropbox Reader™

Dropbox Reader is actually a series of six command line Python scripts which parse the configuration and cache files of a Dropbox account, including the user's registered e-mail address, dropbox identifier, software version info and list of recently changed files stored in config.db, the information about shared directories and files marked for sync stored in filecache.db. [the] Python scripts operate on SQLite3 Dropbox database files.

The screenshot shows the Cyber Marshal website with a navigation bar at the top. The main content area is titled "Dropbox Reader™" and contains sections for "Software Instructions", "License", "Download", and "Script Details". A sidebar on the left features the ATC-NY logo.

Cyber Marshal
ATC-NY's computer forensic software products, training and services

Cyber Marshal Home Cyber Marshal Utilities

Dropbox Reader™

Dropbox Reader is a suite of command-line tools for parsing configuration and cache files associated with the Dropbox cloud storage software. These tools can run on Windows, Macintosh, and Linux systems.

Software Instructions

Please read the README.txt file, included in the download, before using the software.

License

By using this software, you agree to the terms in the LICENSE.txt file included in the download and reproduced [here](#).

Download

Dropbox Reader 1.0 ([.zip](#)) ([.tar.gz](#)) [released June 2011]

Script Details

Dropbox Reader consists of six Python scripts:

- **read_config** script outputs the contents of the Dropbox config.db file in human-readable form. This includes the user's registered e-mail address and Dropbox identifier, software version information, and a list of the most-recently-changed files.
- **read_filecache_config** script outputs configuration information from the Dropbox filecache.db file. This includes information about shared directories that are attached to the user's Dropbox account.
- **read_filejournal** script outputs information about Dropbox synchronized files stored in the filecache.db file. This includes local and server-side metadata and a list of block hashes for each Dropbox-synchronized file.

<http://www.cybermarshal.com/index.php/cyber-marshall-utilities/dropbox-reader>

<http://www.betanews.com/article/Now-anyone-not-just-cops-with-a-warrant-can-peek-inside-your-Dropbox/1308256016?=>

Errrggh...

April 13, 2011



Dropbox has changed their TOS...

April 13, 2011



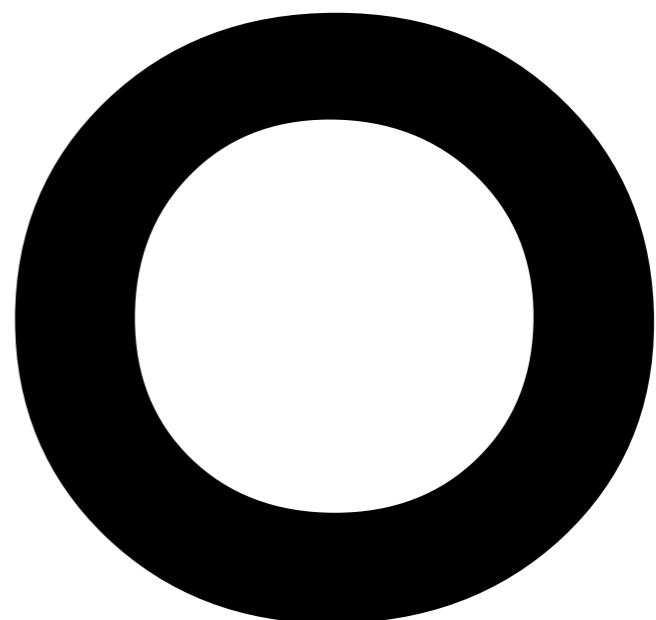
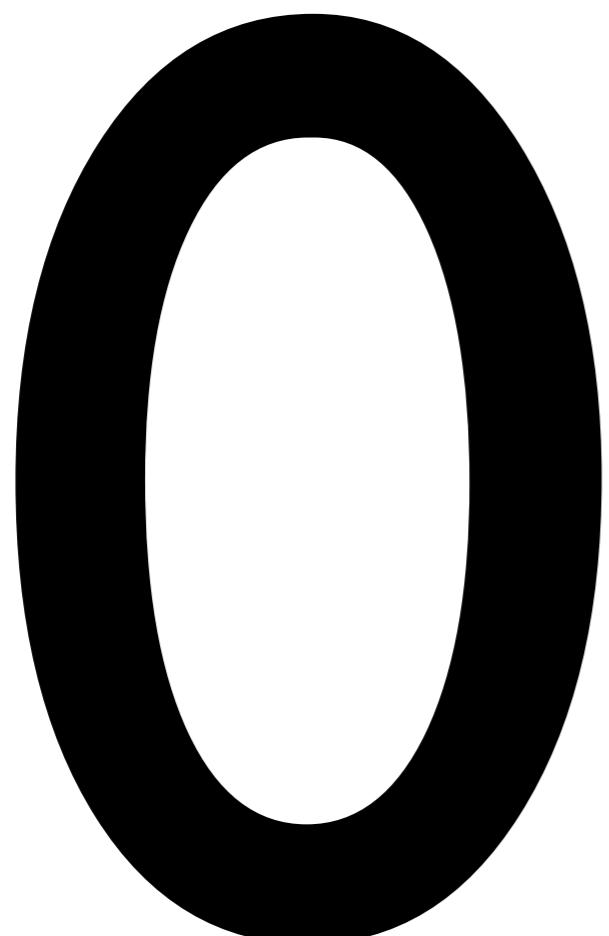
From

All files stored on Dropbox servers are encrypted (AES256) and are inaccessible without your account password.

April 13, 2011



To
All files stored on Dropbox servers are encrypted (AES256)
and are inaccessible without your account password.





“So, Dropbox is, a free app with privacy and security concerns that you can use to freely backup your stuff and share your files with others, huh? Great, that's just what everybody needs, right?” Ceiling Cat







Unison

What can we use as a trigger to kick off a sync?

inotify

it watches for notices from the Linux kernel (since 2.6)

Jun 21 20:57:32 rogue Dropbox[1448]: Unable to monitor entire Dropbox folder hierarchy. Please run "echo 100000 | sudo tee /proc/sys/fs/inotify/max_user_watches" and restart Dropbox to correct the problem.

[https://code.google.com/p/lSyncd/](https://code.google.com/p/lsyncd/)

 **Lsyncd**
Lsyncd (Live Syncing Daemon) synchronizes local directories with a remote targets

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Lsyncd - Live Syncing (Mirror) Daemon

Description

Lsyncd watches a local directory trees event monitor interface (inotify). It aggregates and combines events for a few seconds and then spawns one (or more) process(es) to synchronize the changes. By default this is [rsync](#). Lsyncd is thus a light-weight live mirror solution that is comparatively easy to install not requiring new filesystems or blockdevices and does not hamper local filesystem performance.

Rsync+ssh is an advanced action configuration that uses a SSH to act file and directory moves directly on the target instead of retransmitting the move destination over the wire.

Fine-grained customization can be achieved through the config file. Custom action configs can even be written from scratch in cascading layers ranging from shell scripts to code written in the [Lua language](#). This way simplicity can be balanced with powerfulness. See the manual for details [Lsyncd20Manual](#).

License: [GPLv2](#) or any later GPL version.

When to use

Lsyncd is designed to synchronize a local directory tree with low profile of expected changes to a remote mirror. Lsyncd is especially useful to sync data from a secure area to a not-so-secure area.

Other synchronization tools:

- [DRBD](#) operates on block device level. This makes it useful for synchronizing systems that are under heavy load. Lsyncd on the other hand does not require you to change block devices and/or mount points, allows you to change uid/gid of the transferred files, separates the receiver through the one-way nature of rsync. DRBD is likely the better option if you are syncing Databases.
- [GlusterFS](#) and [BindFS](#) use a FUSE-Filesystem to interject kernel/userspace filesystem events.

Lsyncd usage examples

And how to securely transfer data? (no-brainer)





<http://fak3r.com/geek/howto-build-your-own-open-source-dropbox-clone/>

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HOWTO build your own open source Dropbox clone

by PHIL on Sep 14, 2009 • 11:21 pm

UPDATE #3: Ok, a long, overdue update on this project. I've worked on the next version of this ideal that I encourage everyone to checkout and try for themselves. You can get it on Github, and the [project's name is lipsync](#). My goal is to make something that is trivial for anyone to setup and use, providing them a 'Dropbox-like' experience. As before I've focused on the backend, server side, part of the game to get that working, but would be happy to work with anyone that wanted to work on a GUI, or integrate this with existing projects, such as [Sparkleshare](#), which seems to have a great GUI, but a backend that relies on things like Github for storage. So give it a look and remember, the more feedback the better; and as always don't worry about offending me! Thanks.

UPDATE #2: There was a big influx of new hits/posts on this article last week thanks to [Lifehacker Australia](#) linking to it, plus they even came up with a [pretty sweet logo](#). It's very cool that so many are (still) interested in this project – and that's what it has become; a project. I'll be releasing code to setup a complete command-line Dropbox like implementation on Linux in about a week. Code will be hosted on [github.com](#) and I'm hoping it will spur others to work on cross platform front-ends to talk to it. So far the technology is there, I'm just using what others have built, it's just a matter of hooking it all up! After all, why reinvent the wheel? (not that I could 😊) Thanks again for all the comments and support!

UPDATE: Thanks to everyone who has contributed to this, and the [Reddit thread](#), as it has provided some great ideas building off of my concept. I'm starting to rethink about how we could have version control on top of things



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[Would it be possible to use lsyncd with unison instead of rsync?](#)
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[\[+\] fak3r_](#) 1 point 1 year ago
[No, but you could make it work with inosync, or some of the other options I tried in the beginning of the article.](#)
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[with either inotify or iwatch, it just watches for an action from the kernel, and then it can issue some arbitrary command, so in theory it should work equally as well with Unison. I looked at it, but apparently development has ceased for it, whereas rsync has been going forever. \(just about ;\)](#)
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[This is pretty cool. I love Dropbox, and I love the fact that it works on any OS. But this can be very valuable.](#)
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[Why not a network filesystem like NFS or AFS? There are Windows, Mac, and Linux \(et al.\) clients for AFS, for example.](#)

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How To Make Your Own Dropbox-Like Sync And Backup Service

By Adam Dachis on October 14, 2010 at 4:30 AM

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DIY Dropbox Alternatives

Posted by [Soulskill](#) on Wednesday July 27, @05:33AM from the not-quite-as-parent-friendly dept.

 101010
010101

jfruhlinger writes

"Dropbox was a service that many techies fell in love with, only to be disappointed when they found out about its [dodgy security](#) and [dubious copyright claims](#). The company's tried to make amends — but what other options are there for those who have had enough? While there's nothing quite as seamless out there, it's not difficult to [build your own Dropbox alternatives](#) from freely available software and services from other vendors."

[144 of 188 comments loaded](#)

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Is using another third party service (Score:5, Insightful)

by [Neil_Brown](#) (1568845) on Wednesday July 27, @05:42AM (#36892806) [Homepage](#)

really "building your own" solution?

I appreciate that one could argue that using software you haven't written yourself shouldn't count, but putting something together with a Linux box running Apache, WebDAV and various other things seems more "building your own" than simply using an existing third party alternative, as the article recommends.

<http://www.itworld.com/storage/186547/diy-dropbox-alternatives>

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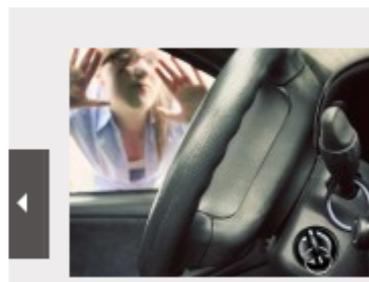


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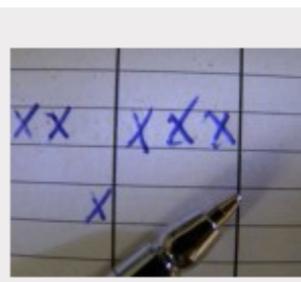
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DIY Dropbox alternatives

Give your cloud storage a personal touch.

6

By Kevin Purdy, ITworld | Storage, backup, cloud storage [5 comments](#) [Like](#) 29

July 26, 2011, 8:20 AM — Dropbox, when it's working and you feel good about it, is that kind of advanced technology that's indistinguishable from magic. You drop a file into a folder, and it's available on the web, on your other machines, and on your phone, often with multiple version backups. But the curtain has been drawn back on Dropbox's conjury lately, with Terms of Service (TOS) changes, a brief but scary any-password-opens-any-account moment, and then another TOS change that left many confused.

It might be the case, then, that you don't want to trust just one blue-hued box for your file syncing. Your clients might have concerns about their data being stashed on a third party's servers, or you might just be a fan of

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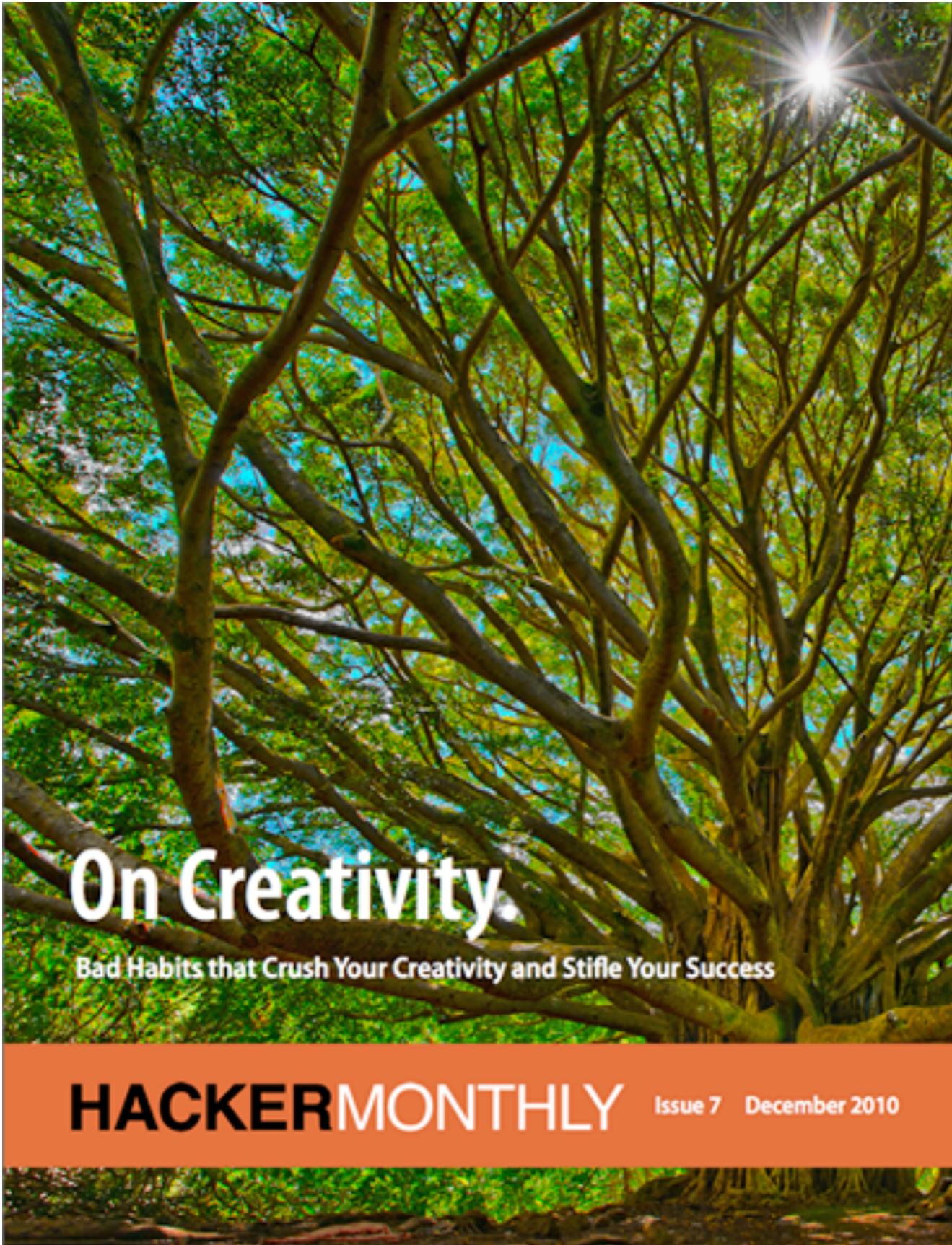


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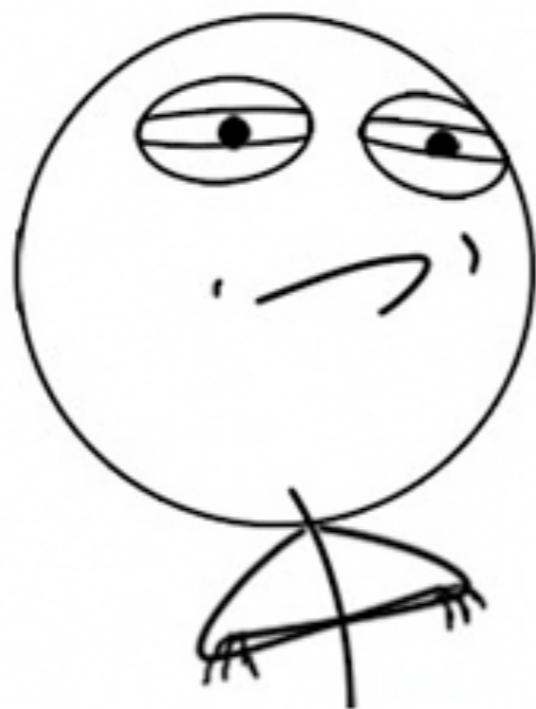
"Building an Open Source Dropbox Clone"

Hacker Monthly
December 2010:34-36

<http://hackermonthly.com/issue-7.html>



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<https://github.com/philcryer/lipsync>

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philcryer / lipsync

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lipsync sets up a lightweight service that provides command-line, Dropbox like syncing — [Read more](#) <http://lipsync.it> Downloads

SSH HTTP Git Read-Only git@github.com:philcryer/lipsync.git Read+Write access

added logic to the top to NOT RUN if there is no lipsyncd running. This
philcryer (author) about 22 hours ago commit 296f9602680899584de5
tree 55b3270e0d4fb5bd0710 parent 08319c5d809b166ffce0

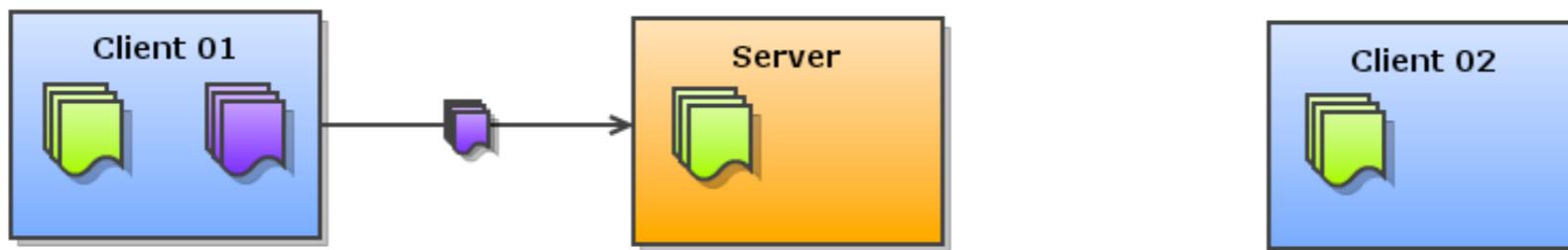
[lipsync /](#)

name	age	message	history
bin/	about 22 hours ago	added logic to the top to NOT RUN if there is no l... [philcryer]	
docs/	4 days ago	updated docs with some new details [philcryer]	
etc/	June 13, 2011	some sed-magic in build.conf() [acoolon]	
LICENSE	March 25, 2011	install modifications, finished new config setup [philcryer]	
README.rdoc	4 days ago	updated install link again... [philcryer]	
install.sh	4 days ago	checks that lsyncd is version 2.x or greater, othe... [philcryer]	

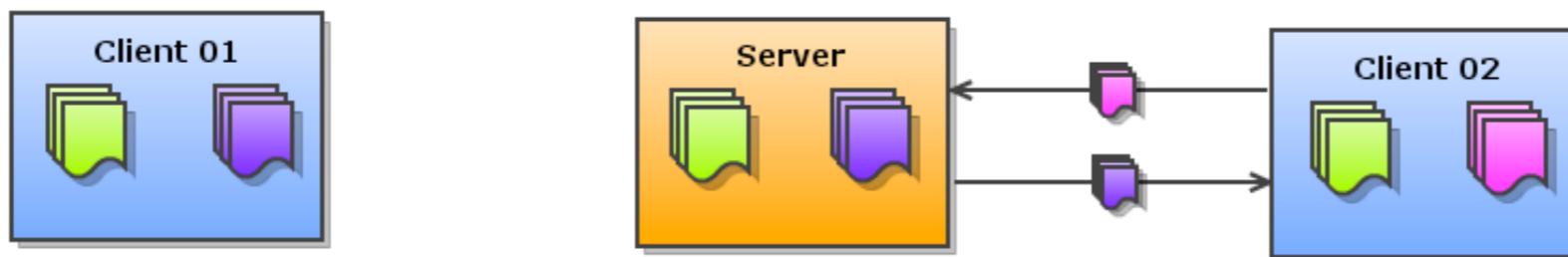
- ✓ lipsync daemon in Linux runs watches for file changes via inotify
- ✓ kicks off rsync over ssh to securely sync the data
- ✓ growl-like desktop notifications
- ✓ great response from the community
- ✓ user's forking the project, submitting pull requests
- ✓ contributing to an active mailing list
 - a contributor has lipsync running on OSX (ready 'soon')
 - make it more secure/private/cool/etc
 - encrypted filesystems, p2p, freenet, bittorrent?
 - make it cross platform
 - Linux, Mac, Windows, Android, iOS, etc
 - preliminary ideas of how a win32 version 'could work'
 - installer running under Cgywin?
 - more ideas from the community

[lipsync \(<https://github.com/philcryer/lipsync>\)](https://github.com/philcryer/lipsync)

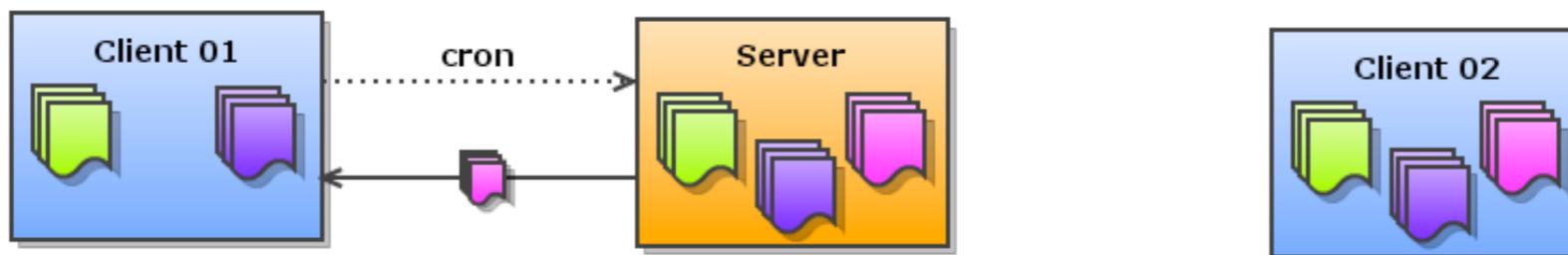
1) A new file is added to Client 01, lipsync sees it, and kicks off the sync with the server.



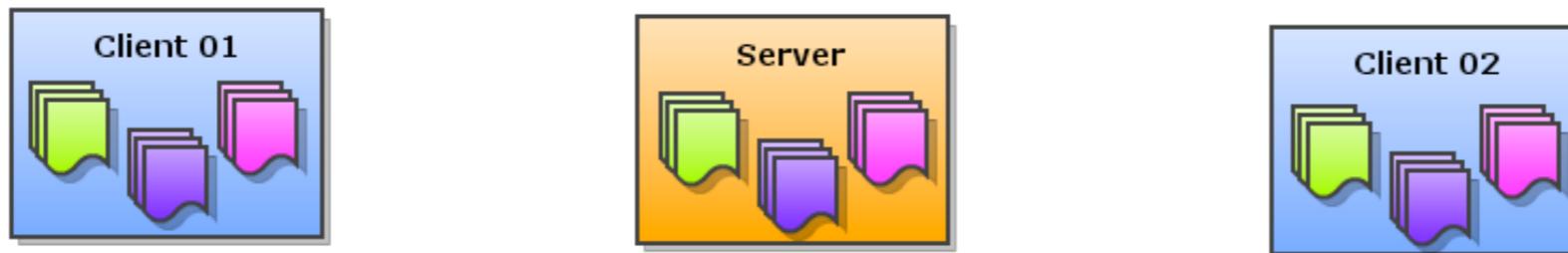
2) A new file is added to Client 02, lipsync sees it, kicks off the sync with the server, where it also finds a file that it needs.



3) While Client 01 could get the file the next time it has a new file to sync, instead it kicks off the scheduled cron job, where it finds the server has a file it needs.

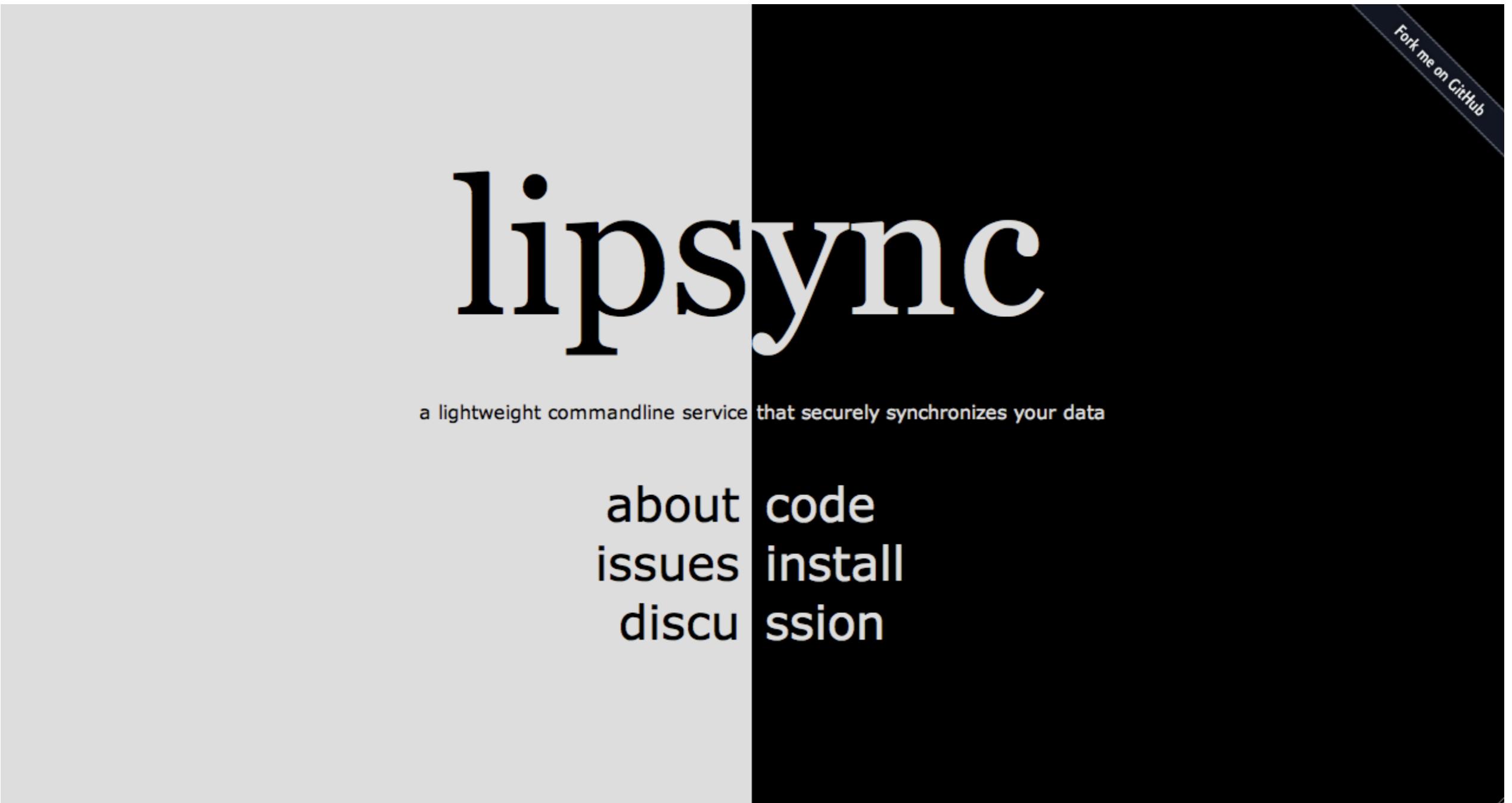


4) Client 01 has the same files that Client 02 has, thanks to the Server syncing the files.



- ✓ lipsync daemon in Linux runs watches for file changes via inotify
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 - make it cross platform
 - Linux, Mac, Windows, Android, iOS, etc
 - preliminary ideas of how a win32 version 'could work'
 - installer running under Cgywin?
 - more ideas from the community

<http://lipsync.it/>



Thanks to Anthony for the name

Conclusions



- it is possible to create a secure, file distribution app that protects user's privacy and security...
 - it won't be built by any for-profit, third party; it will be built by the community
 - we should look at all cloud or 'app store' offerings with this same skepticism

- it is possible to create a secure, file distribution app that protects user's privacy and security...
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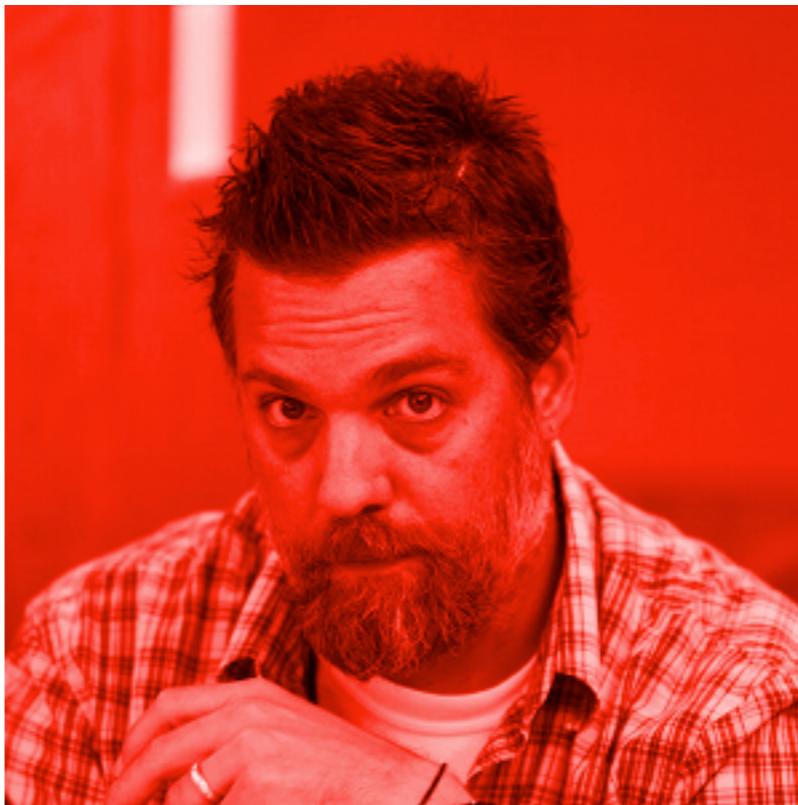
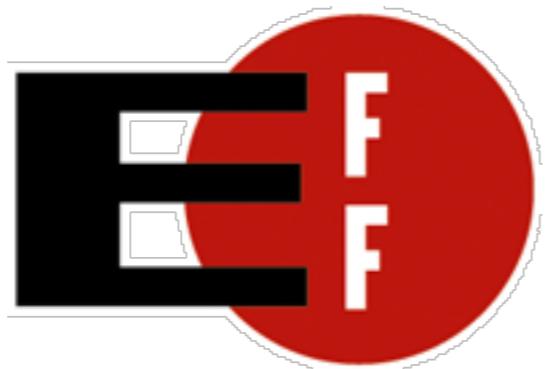
- interested in lipsync? Get involved, try it out, join the mailing list, submit an issue, fork it!
- discuss your ideas, implement them, make changes, think about what you want it to do, make it better
- continue to ask questions, explore privacy and security in software

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- discuss your ideas, implement them, make changes, think about what you want it to do, make it better
- continue to ask questions, explore privacy and security in software
- and always bring a towel!

www.lipsync.it

Thanks to SBS Creatix
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Thanks to DEF CON,
EFF and Nikita



www.philcryer.com
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Special thanks to
Mary, Kacy and Ben

Keep circulating the tapes!

