VPS for Fun and Profit!

David Lachut

30 September 2015

Outline

Who is this guy?

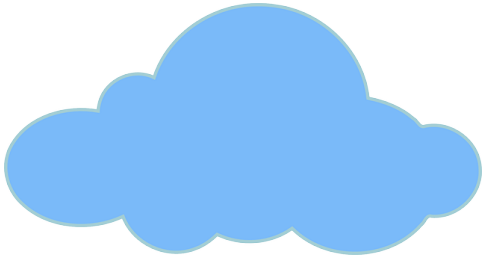
What is a VPS?

Why would I want one?

How could I use it?

Wow! Where can I get one?

Servers are great!



- Cheap
- Reliable
- Easy to use
- Convenient
- Useful

Who is this guy?

- David Lachut
- PhD Candidate in Computer Science
  - *Holistic Home Energy Management: From Sensing to Data Analytics*
- B.S. Physics, 2009, University of Arkansas–Fayetteville
- Linux and Open Source Enthusiast

Disclaimers

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- No animals were harmed in the making of this presentation.

What is virtualization?

- A software simulation of computer hardware
- A way to run multiple computers on the same computer at the same time
- Para-virtualization shares a kernel with multiple environments

What is a Virtual Private Server?

A VPS is...	A VPS isn't...
An actual server	Just a webhost
In *THE CLOUD*	An on-premises server
Virtualized	A dedicated server

Why you wouldn't use a VPS

- Data is super-duper-top-secret
- Have specific or arcane requirements
- Need access to the bare-metal
- "It's stupidity. It's worse than stupidity"
  - *RMS*

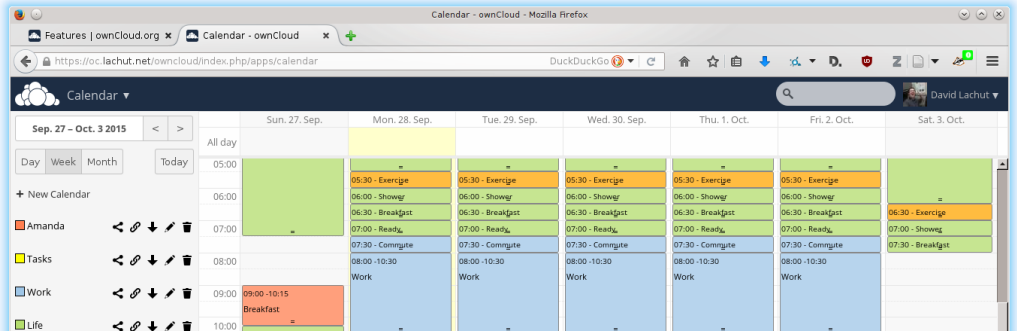
Why you would use a VPS

- Someone else does hardware maintenance
- Always on for a predictable cost
- Super high speed
- I am ROOT

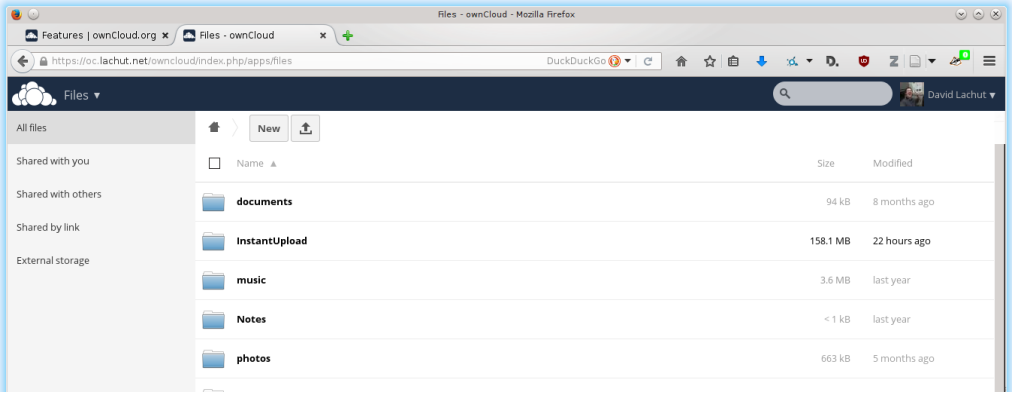
What can I do with one of these VPS things?

You can run . . .

Sync your calendars and contacts

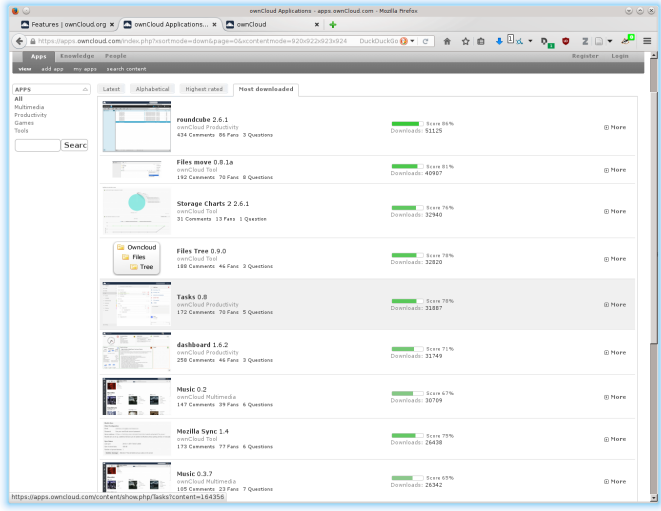


Sync your files, Back-up your photos



Extend it with apps

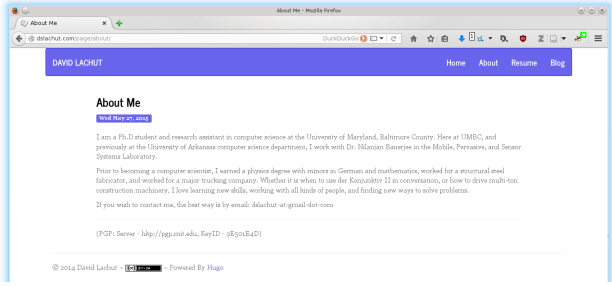
- ToDo List
- Music
- Photo gallery
- RSS
- Firefox Sync
- Note taking
- Document editing
- Journal
- External storage
- Encryption
- E-Mail



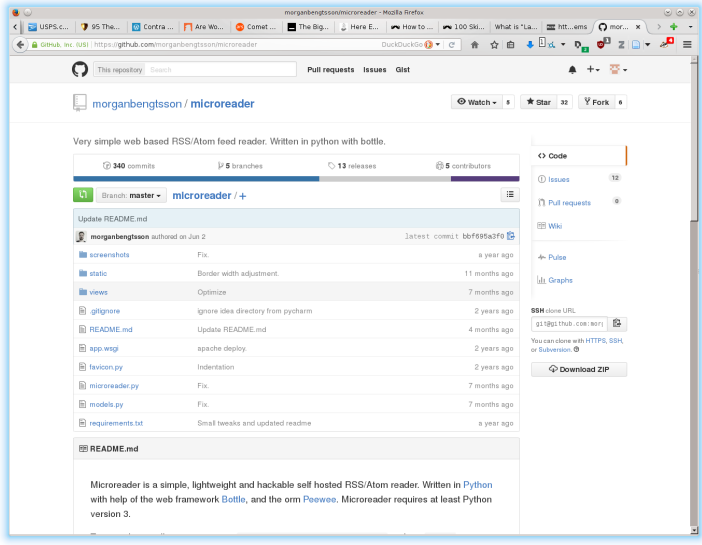
You can run . . .

Host your own website

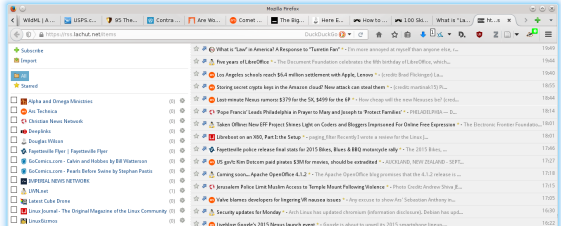
- Replace Blogger and Wordpress
- Written in Go
- Many customizable templates
- Static site generator
- Write posts in Markdown



You can run . . .


morganbengtsson/microreader - Mozilla Firefox
This repository
Pull requests
Issues
Gist
morganbengtsson / microreader
Watch 8
Star 32
Fork 6
Very simple web based RSS/Atom feed reader. Written in python with bottle.
340 commits
5 branches
13 releases
5 contributors
Branch: master
microreader / +
Update README.md
morganbengtsson authored on Jun 2
latest commit bbf695a3f0
screenshots Fix. a year ago
static Border width adjustment. 11 months ago
views Optimize 7 months ago
.gitignore ignore idea directory from pycharm 2 years ago
README.md Update README.md 4 months ago
app.wsgi apache deploy. 2 years ago
favicon.py Indentation 2 years ago
microreader.py Fix. 7 months ago
models.py Fix. 7 months ago
requirements.txt Small tweaks and updated readme a year ago
README.md
Microreader is a simple, lightweight and hackable self hosted RSS/Atom reader. Written in Python with help of the web framework Bottle, and the orm Peewee. Microreader requires at least Python version 3.
Code
Issues 12
Pull requests 0
Wiki
Pulse
Graphs
SSH clone URL
git@github.com:mor
You can clone with HTTPS, SSH, or Subversion.
Download ZIP

Track RSS feeds

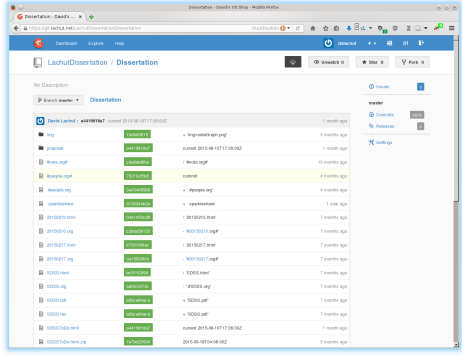


- Replace Google Reader
- Subscribe to feeds
- Convenient browsing in one place
- Use from any computer

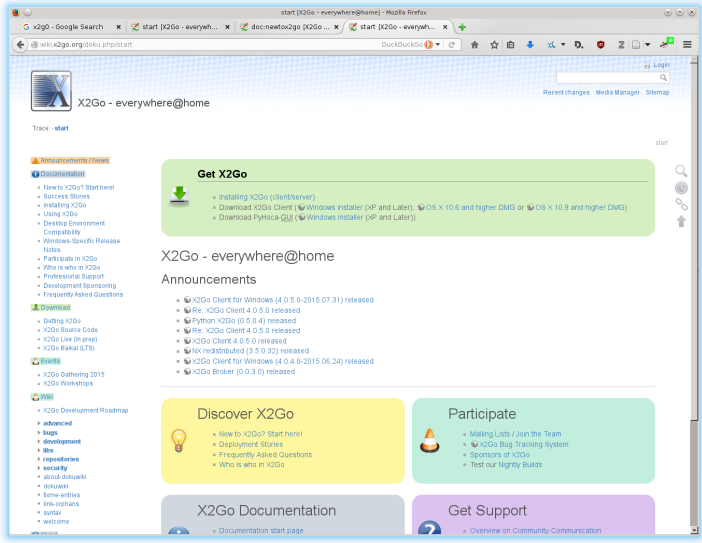
You can run . . .

Host your own Github

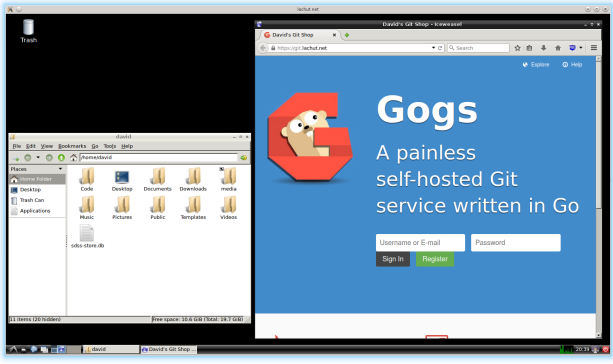
- Gogs: The Go Git Service
- Github, but with free, private repos
- No integrated bug-tracker
- No integrated wiki
- Fast, minimal-dependencies



You can run . . .

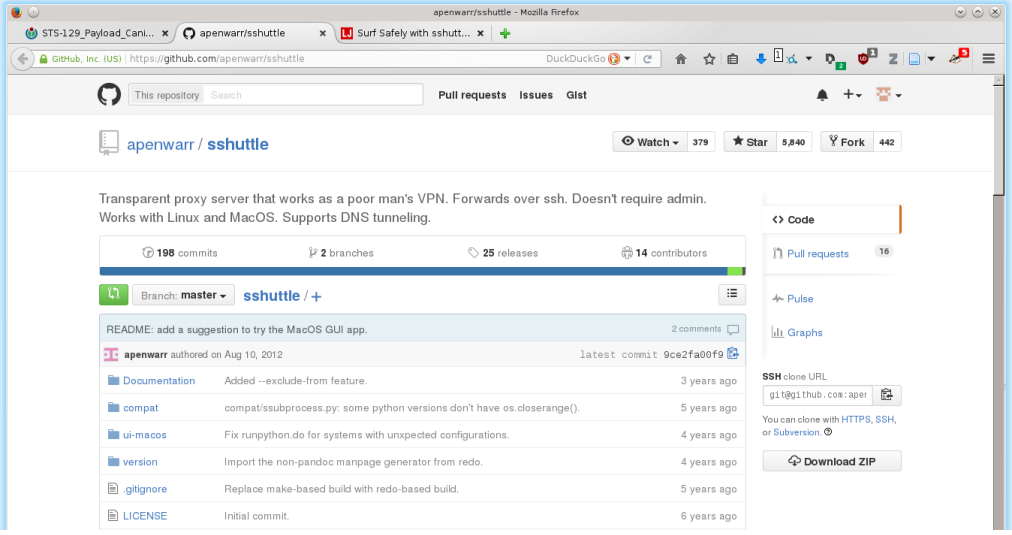

start [X2Go - everywhere@home] - Mozilla Firefox
x2go - Google Search
start [X2Go - everywh...
doc:newtox2go [X2Go ...
start [X2Go - everywh...
wiki.x2go.org/doku.php/start
DuckDuckGo
Login
Recent changes Media Manager Sitemap
X2Go - everywhere@home
Trace: start
start
Announcements / News
Documentation
New to X2Go? Start here!
Success Stories
Installing X2Go
Using X2Go
Desktop Environment Compatibility
Windows-Specific Release Notes
Participate in X2Go
Who is who in X2Go
Professional Support
Development Sponsoring
Frequently Asked Questions
Download
Getting X2Go
X2Go Source Code
X2Go Live (in prep)
X2Go Bakal (LTS)
Events
X2Go Gathering 2015
X2Go Workshops
Wiki
X2Go Development Roadmap
advanced
bugs
development
libs
repositories
security
about-dokuwiki
dokuwiki
fixme-entries
link-orphans
syntax
wellcome
Get X2Go
Installing X2Go (client/server)
Download X2Go Client (Windows installer (XP and Later), OS X 10.6 and higher DMG or OS X 10.9 and higher DMG)
Download PyHoca-GUI (Windows installer (XP and Later))
X2Go - everywhere@home
Announcements
X2Go Client for Windows (4.0.5.0-2015.07.31) released
Re: X2Go Client 4.0.5.0 released
Python X2Go (0.5.0.4) released
Re: X2Go Client 4.0.5.0 released
X2Go Client 4.0.5.0 released
NX redistributed (3.5.0.32) released
X2Go Client for Windows (4.0.4.0-2015.06.24) released
X2Go Broker (0.0.3.0) released
Discover X2Go
New to X2Go? Start here!
Deployment Stories
Frequently Asked Questions
Who is who in X2Go
Participate
Mailing Lists / Join the Team
X2Go Bug Tracking System
Sponsors of X2Go
Test our Nightly Builds
X2Go Documentation
Documentation start page
Get Support
Overview on Community Communication

My Raspberry Pi has a Xeon processor



- X2Go is a superb remote-desktop for Linux hosts
- With Linux, Windows, and OSX clients
- Fast enough for Youtube
- Have a high-power computer that feels local, even on a SBC

You can run . . .


apenwarr/sshuttle - Mozilla Firefox
STS-129_Payload_Cani...
apenwarr/sshuttle
Surf Safely with sshutt...
GitHub, Inc. (US) | https://github.com/apenwarr/sshuttle
DuckDuckGo
This repository
Search
Pull requests
Issues
Gist
apenwarr / sshuttle
Watch 379
Star 5,840
Fork 442
Transparent proxy server that works as a poor man's VPN. Forwards over ssh. Doesn't require admin.
Works with Linux and MacOS. Supports DNS tunneling.
198 commits
2 branches
25 releases
14 contributors
Branch: master
sshuttle / +
README: add a suggestion to try the MacOS GUI app.
2 comments
apenwarr authored on Aug 10, 2012
latest commit 9ce2fa00f9
Documentation
Added --exclude-from feature.
3 years ago
compat
compat/ssubprocess.py: some python versions don't have os.closerange().
5 years ago
ui-macos
Fix runpython.do for systems with unxpected configurations.
4 years ago
version
Import the non-pandoc manpage generator from redo.
4 years ago
.gitignore
Replace make-based build with redo-based build.
5 years ago
LICENSE
Initial commit.
6 years ago
Code
Pull requests
16
Pulse
Graphs
SSH clone URL
git@github.com:aper
You can clone with HTTPS, SSH, or Subversion.
Download ZIP

sshuttle is a simple VPN

- Transparent proxy server
- Actually runs on local computer
- Requires local SSH, Python, and Root
- Requires remote server with Python and SSH
- Tunnel all network traffic over SSH

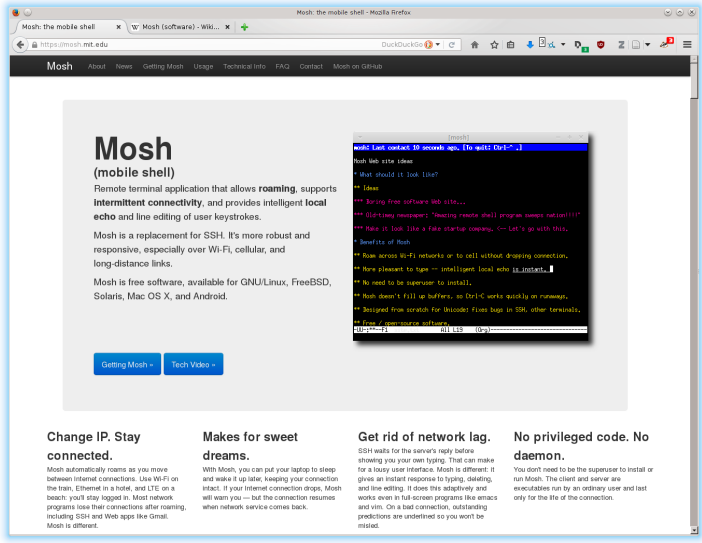
You can try . . .

You can try . . .

irssi

the client of the future

You can try . . .


Mosh: the mobile shell - Mozilla Firefox
Mosh: the mobile shell
Mosh (software) - Wiki...
https://mosh.mit.edu
DuckDuckGo
Mosh
About
News
Getting Mosh
Usage
Technical Info
FAQ
Contact
Mosh on GitHub
Mosh
(mobile shell)
Remote terminal application that allows roaming, supports intermittent connectivity, and provides intelligent local echo and line editing of user keystrokes.
Mosh is a replacement for SSH. It's more robust and responsive, especially over Wi-Fi, cellular, and long-distance links.
Mosh is free software, available for GNU/Linux, FreeBSD, Solaris, Mac OS X, and Android.
[mosh]
mosh: Last contact 10 seconds ago. [To quit: Ctrl-^ .]
Mosh Web site ideas
* What should it look like?
** Ideas
*** Boring free software Web site...
*** Old-timey newspaper: "Amazing remote shell program sweeps nation!!!"
*** Make it look like a fake startup company. <-- Let's go with this.
* Benefits of Mosh
** Roam across Wi-Fi networks or to cell without dropping connection.
** More pleasant to type -- intelligent local echo is instant.
** No need to be superuser to install.
** Mosh doesn't fill up buffers, so Ctrl-C works quickly on runaways.
** Designed from scratch for Unicode! Fixes bugs in SSH, other terminals.
** Free / open-source software.
Getting Mosh »
Tech Video »
Change IP. Stay connected.
Mosh automatically roams as you move between Internet connections. Use Wi-Fi on the train, Ethernet in a hotel, and LTE on a beach: you'll stay logged in. Most network programs lose their connections after roaming, including SSH and Web apps like Gmail. Mosh is different.
Makes for sweet dreams.
With Mosh, you can put your laptop to sleep and wake it up later, keeping your connection intact. If your Internet connection drops, Mosh will warn you — but the connection resumes when network service comes back.
Get rid of network lag.
SSH waits for the server's reply before showing you your own typing. That can make for a lousy user interface. Mosh is different: it gives an instant response to typing, deleting, and line editing. It does this adaptively and works even in full-screen programs like emacs and vim. On a bad connection, outstanding predictions are underlined so you won't be misled.
No privileged code. No daemon.
You don't need to be the superuser to install or run Mosh. The client and server are executables run by an ordinary user and last only for the life of the connection.

You can do other random things

- Host random files too large to email
- Run a Minecraft server
- Host that one project you want to do
- Run a Mumble server
- ...

Where you can get a VPS

This has been *VPS for Fun and Profit!*

- Slides available at Github.com/dslachut/talks/tech
- Copyleft David Lachut 2015, CC-BY-SA
- Questions?