

Why Mac Sysadmins Love Python

Tim Sutton

Concordia University, Fine Arts, Montreal

A screenshot of a Python 2.7.6 terminal window on a Mac. The window title bar shows 'tsutton — python — python'. The terminal text is as follows:

```
Python 2.7.6 (default, Sep  9 2014,  
15:04:36)  
[GCC 4.2.1 Compatible Apple LLVM 6.0  
(clang-600.0.39)] on darwin  
Type "help", "copyright", "credits"  
or "license" for more information.  
>>> import objc
```

A green cursor is visible at the end of the last line.

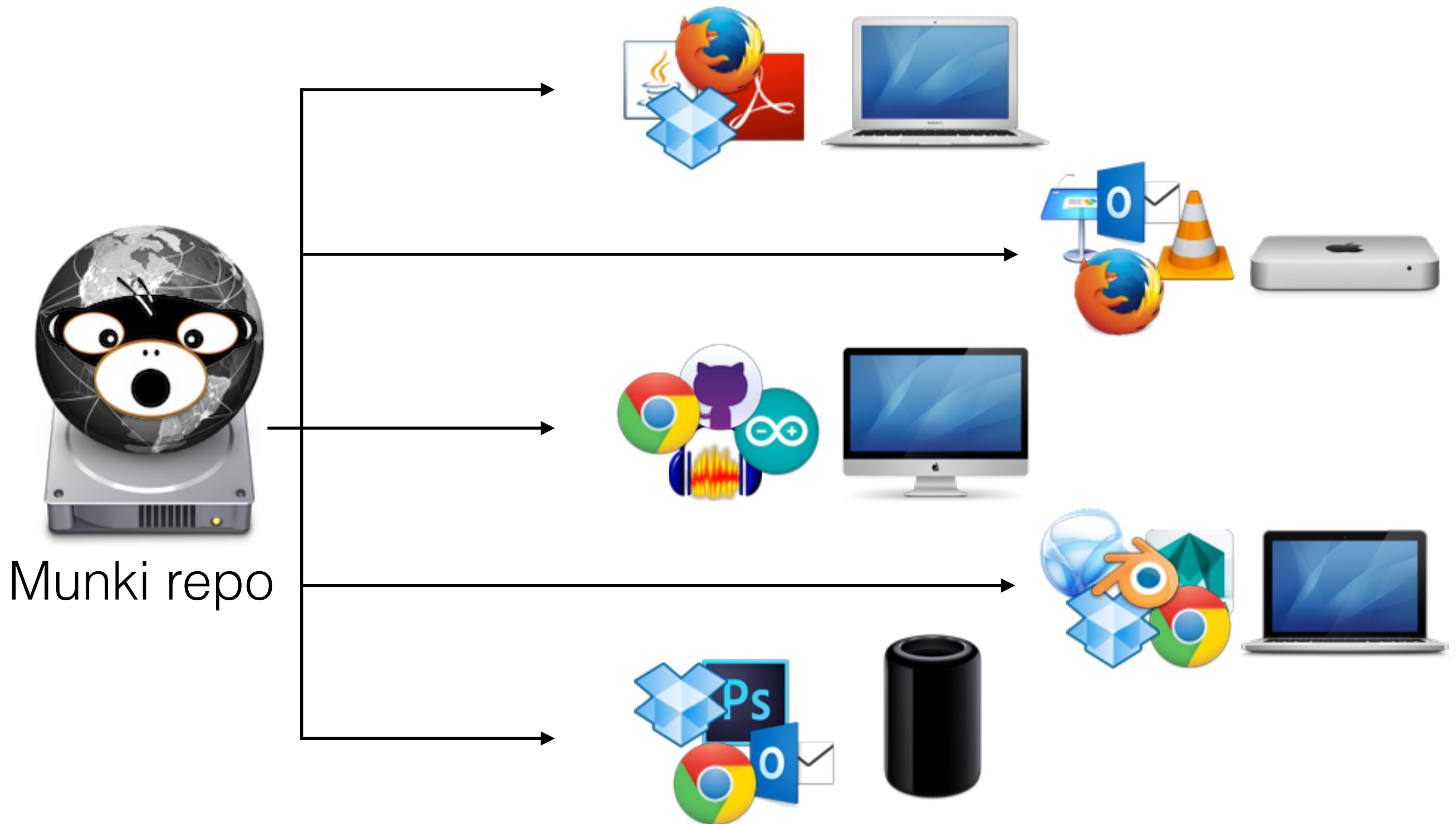
Munki



Greg Neagle, Disney Animation

<https://github.com/munki/munki>

Munki





Software



Categories



My Items



Updates

Search



Concordia University

Fine Arts

Managed Software Centre

Centre for Digital Arts



All items



Adobe After Effects ...
Creativity – Adobe

INSTALL



Adobe Photoshop C...
Creativity – Adobe

INSTALL



Adobe Reader
Productivity – Adobe

INSTALL



Arduino
Developer Tools – Ardui...

INSTALL



Audacity
Music & Audio

INSTALL



Cecilia
Music & Audio – Olivier ...

INSTALL



Cisco AnyConnect C...
Support – Cisco

INSTALL



DaVinci Resolve Lite ...
Video – Blackmagic

INSTALL



Dprint Xerox EV 11.4...
DPrint Printers – CDA / ...

INSTALL



Dprint Xerox EV 2.61...
DPrint Printers – CDA / ...

INSTALL



Dprint Xerox EV 2.72...
DPrint Printers – CDA / ...

INSTALL



Dprint Xerox EV 2.75...
DPrint Printers – CDA / ...

INSTALL

Quick Links

All Categories

[CDA Website](#)
[Getting CDA Support](#)

[MyConcordia Portal](#)
[Concordia Retail Stores](#)











Managed Software Center

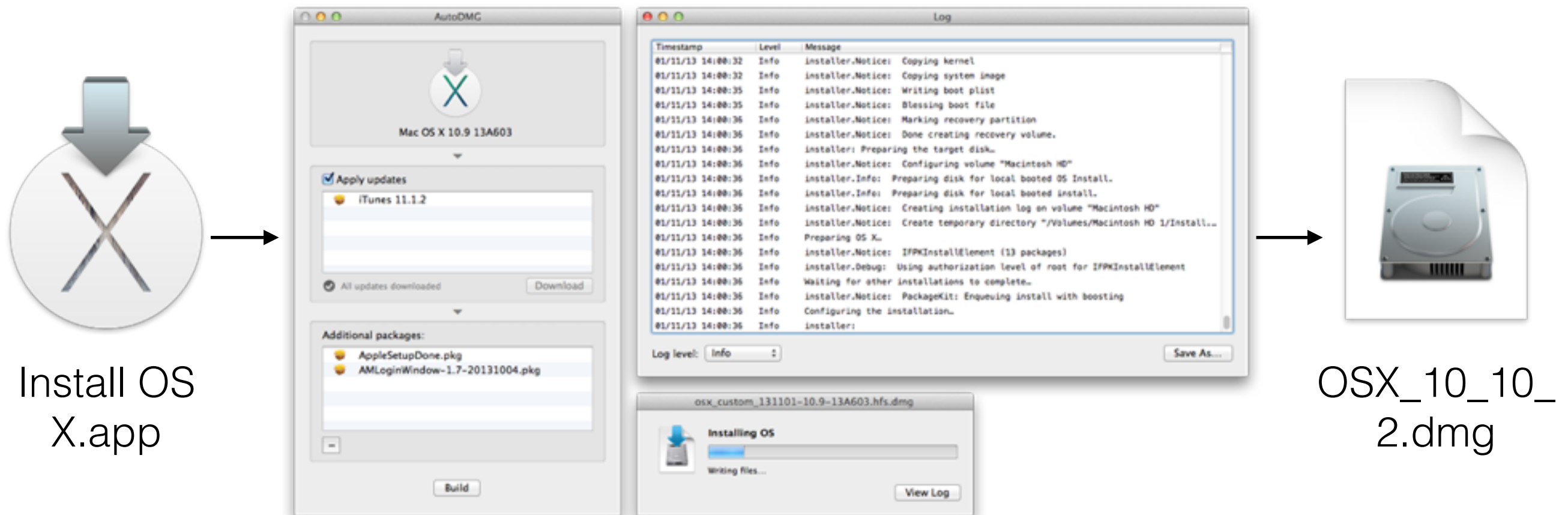


Search

My Items

	Adobe Reader Adobe	11.0.10	102.4 MB	Will be installed +	CANCEL INSTALL
	Arduino Arduino	1.0.5	82.5 MB	Will be installed +	CANCEL INSTALL
	Cecilia Olivier Bélanger	5.1.0	26.8 MB	Will be installed +	CANCEL INSTALL
	Cisco AnyConnect Concordia VPN Client Cisco	3.1.04074	4.8 MB	Downloading	CANCEL INSTALL
	Java SE Runtime 7 Oracle	1.7.75.13	48.6 MB	Will be installed +	CANCEL INSTALL
	Pd (PureData) Extended	0.43.4	45.0 MB	Will be installed +	CANCEL INSTALL
	Skype Microsoft	7.5.0.738	38.1 MB	Downloading	CANCEL INSTALL
	The Unarchiver	3.9.1	5.5 MB	Install requested +	CANCEL INSTALL

AutoDMG ("Auto-Damage")



Per Olofsson, University of Göteborg
<https://github.com/MagerValp/AutoDMG>

AutoPkg

<https://github.com/autopkg/autopkg>

- Finding out about new updates
- Downloading updates
- Unpacking, getting version metadata
- Fixing bad installers
- Importing into a software management system (e.g. Munki)
- Adding site-specific configuration

AutoPkg

```
$ autopkg run --recipe-list list.txt
```

The following new items were imported:

Name	Version	Catalogs	Pkginfo Path
----	-----	-----	-----
AdobeReader	11.0.10	testing	apps/Adobe/AdobeReader-11.0.10.plist
Blender	2.73a	testing	apps/Blender/Blender-2.73a.plist
Firefox	36.0.1	testing	apps/firefox/Firefox-36.0.1.plist
Go	go1.4.2	testing	apps/Go/Go-go1.4.2.plist
GoogleChrome	41.0.2272.89	testing	apps/GoogleChrome-41.0.2272.89.plist
OracleJava8	1.8.40.25	testing	plugins/Java/OracleJava8-1.8.40.25.plist
Python3	3.4.3	testing	developer/Python3-3.4.3.plist
R	3.1.3	testing	apps/R/R-3.1.3.plist
Skype	7.5.0.738	testing	apps/Skype-7.5.0.738.plist

Bash:

```
$ array=(  
    $(diskutil list \  
    | awk -F"/" '/dev\./disk/ {print $3}'  
    )  
$ echo $array  
disk0 disk1
```

Python:

```
p = Popen(['diskutil', 'list', '-plist'],  
          stdout=PIPE, stderr=PIPE)  
out, err = p.communicate()  
if out:  
    du_data = plistlib.readPlistFromString(out)  
print du_data['WholeDisks']  
['disk0', 'disk1']
```

Python Objective-C Bridge (PyObjC)

- System Configuration (host data, GUI console user)
- Notification Center
- Preferences (ie. `defaults`) and plists (more formats than plistlib)
- FSEvents (filesystem events API)
- Location Services
- CoreGraphics (displays, color management, graphics)
- Cocoa / AppKit

Thank you!



@timsutton



@tvsutton



<http://macops.ca>