Docker: use cases

(by someone who doesn't know anything about Docker)

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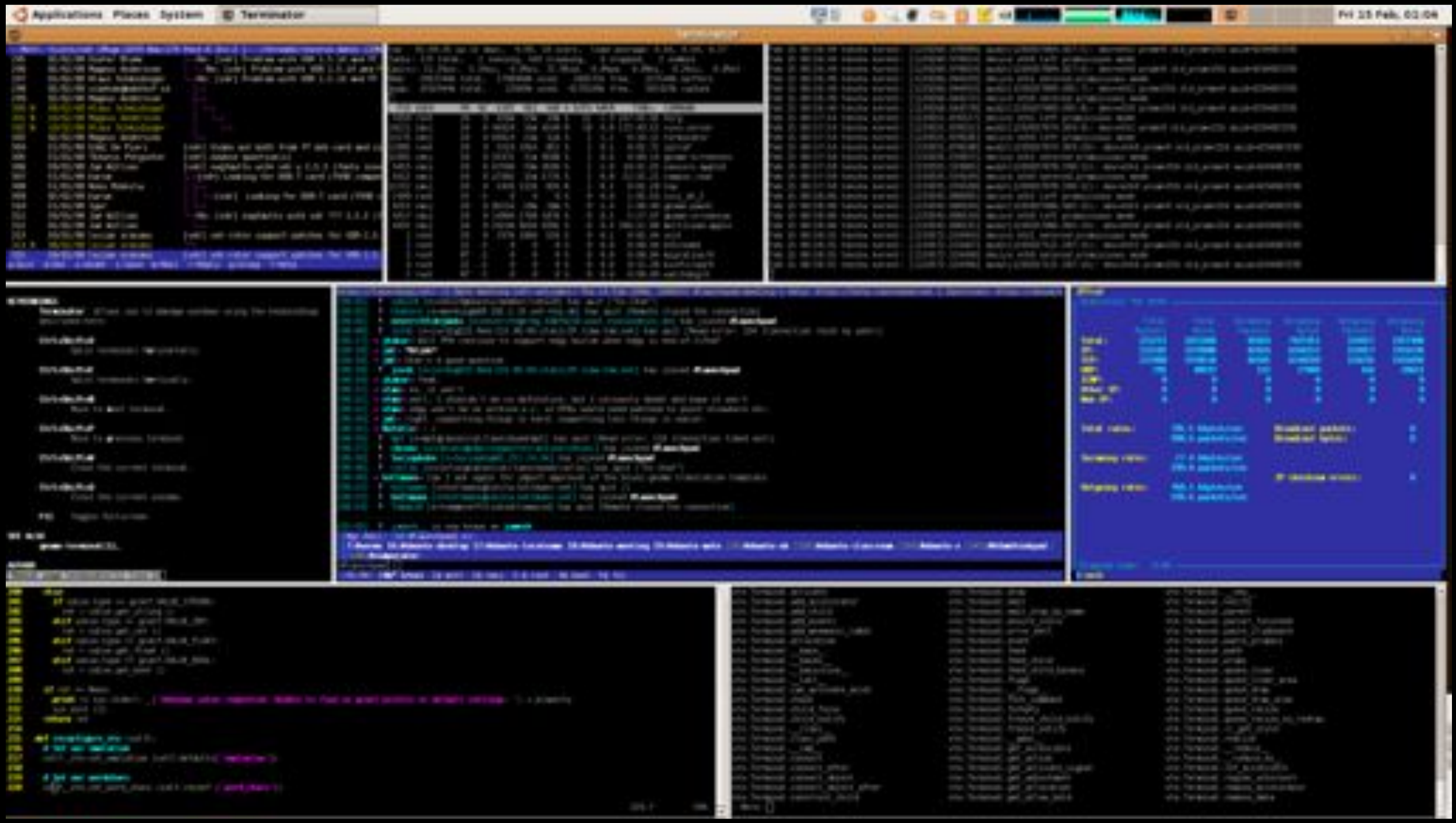
@GrahamRPugh


Applications Places System
Terminator
Fri 15 Feb, 01:04

CAUTION
KEEP
CALM
AND
ATTACK

MunkiAdmin-1.0.3
3 items
Applications
MunkiAdmin.app
Utilities
MunkiAdmin-1.0.3

Install Munki - Managed software installation for OS X
Select a Destination
Introduction
Destination Select
Installation Type
Installation
Summary
Select the disk where you want to install the Munki - Managed software installation for OS X software.
Macintosh HD
788.51 GB available
1.12 TB total
Installing this software requires 5.1 MB of space.
You have chosen to install this software on the disk "Macintosh HD".
Go Back
Continue

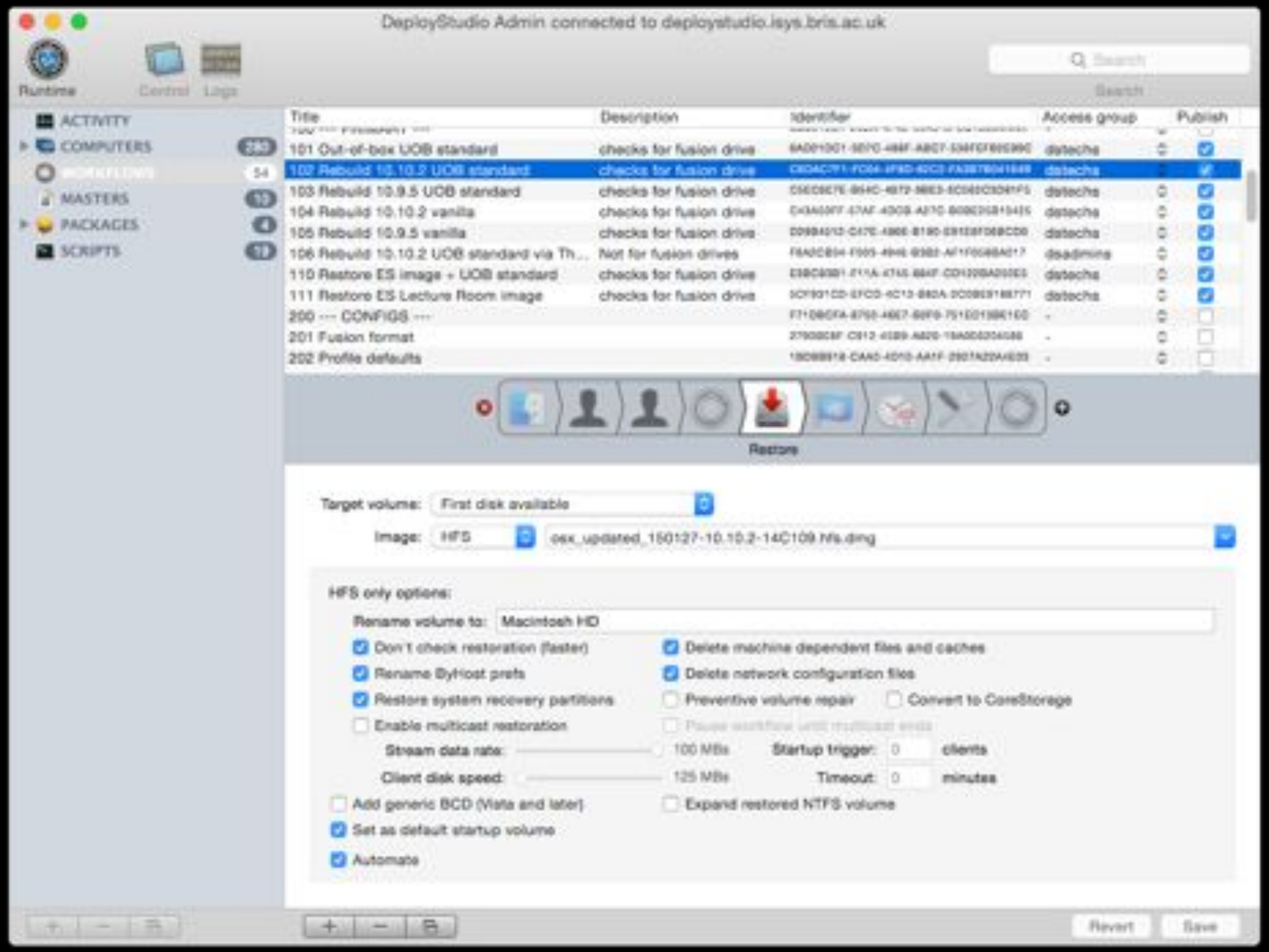
Remote Desktop

Observe Control Curtain Copy Install UNIX Reports Spotlight Search Filter

- All Computers
- Scanner 20
- Scanner 21
- Scanner 80
- Scanner 81
- Scanner 85
- Scanner individual
- Scanner
- Task Server
- Active Tasks
- History
  - Send UNIX C...
  - Restart Com...
  - Log Out Curr...
  - Log Out Curr...
  - Log Out Curr...
  - System Over...
  - Send UNIX C...
  - Copy Items
  - Copy To This...
  - Copy Items
  - Copy Items

Name	Current Status	IP Address	Current Application	ARD Version	Current User	OS Version	LOM Status	Machine
deploystudio	Offline	137.222.49.224	–	3.6.2	–	10.10.1 (14B25)	–	Mac mini
DeployStudio	Idle (71h 39m)	137.222.44.4	Installer	3.6.2	IT Mac VT	10.10....C1510)	–	Mac mini
gly-mini-g27	Idle (115h 17m)	137.222.21.197	Microsof...werPoint	3.6.2	anyuser	10.7.5 (11G63)	–	Mac mini
gly-mini-g38a	Access Denied	137.222.21.173	–	3.5.2	–	–	–	–
gly-mp-teanby	Idle (959h 52m)	137.222.21.115	Login Window	3.7.1	–	10.7.5 (11G63b)	–	Mac Pro
gly-webserver	Idle (58h 10m)	137.222.20.4	Login Window	3.4	–	10.5.8 (9L31a)	Offline	Xserve
gly-xs-bigga	Idle (2h 13m)	137.222.21.54	Finder	3.7.1	juliet	10.9.5 (13F34)	Access De...	Xserve
gly-xs-teanby	Idle (71h 14m)	137.222.21.55	Terminal	3.6.2	IT Support	10.9.5 (13F34)	Access De...	Xserve
gly-xserv3	Idle (934h 58m)	137.222.21.118	Terminal	3.7.1	IT Services	10.7.5 (11G63)	Offline	Xserve
it013550	Offline	137.222.44.155	–	3.7.1	–	10.7.5 (11G63b)	–	MacBook
majorite	Access Denied	137.222.20.116	–	3.5.4	–	–	–	–

11 computers 1 selected


DeployStudio Admin connected to deploystudio.isys.bris.ac.uk
Runtime
Control
Logs
Search
ACTIVITY
COMPUTERS
WORKFLOWS
MASTERS
PACKAGES
SCRIPTS
Title
Description
Identifier
Access group
Publish
101 Out-of-box UOB standard
checks for fusion drive
102 Rebuild 10.10.2 UOB standard
103 Rebuild 10.9.5 UOB standard
104 Rebuild 10.10.2 vanilla
105 Rebuild 10.9.5 vanilla
106 Rebuild 10.10.2 UOB standard via Th...
Not for fusion drives
110 Restore ES image + UOB standard
111 Restore ES Lecture Room image
200 --- CONFIGS ---
201 Fusion format
202 Profile defaults
Restore
Target volume:
First disk available
Image:
HFS
osx_updated_150127-10.10.2-14C109.hfs.dmg
HFS only options:
Rename volume to:
Macintosh HD
Don't check restoration (faster)
Delete machine dependent files and caches
Rename ByHost prefs
Delete network configuration files
Restore system recovery partitions
Preventive volume repair
Convert to CoreStorage
Enable multicast restoration
Stream data rate:
100 MBs
Startup trigger:
clients
Client disk speed:
125 MBs
Timeout:
minutes
Add generic BCD (Vista and later)
Expand restored NTFS volume
Set as default startup volume
Automate
Revert
Save

deploystudio.iays.bris.ac.uk

Profile Manager

Search Device Groups

IT Mac VT

LIBRARY

- Apps
- Books
- Devices
- Device Groups
- Users
- Groups

ACTIVITY

- Active Tasks
- Completed Tasks

Earth Sci Lecture Rooms
No Members

Earth Sci Lecture Rooms
No Members

About | Settings | Apps | Books | Members | Act

Settings for Earth Sci Lecture Rooms

General

Login Window

Download | Edit

Revert | Save

Afternoon
Client Management and User Experience
Client Support: Troubleshooting Tools
Computer End of Life: Considerations, Same Disposal

CASPER

Managed Software Center

Software Categories My Items Updates

Managed Software Center

All items

Adobe Flash Player
Internet - Adobe
Installed
REMOVE

Adobe Reader
Productivity - Adobe
Installed
REMOVE

Alinof Timer
Productivity - Alinof Softwar...
INSTALL

Evernote
Organization - Evernote
Installed
REMOVE

Flip4Mac
Media - Telestream
Installed
REMOVE

Google Chrome
Internet - Google
Installed
REMOVE

Google Earth
Internet & Cloud - Google
INSTALL

Microsoft Silverlight
Internet - Microsoft
Installed
REMOVE

Mozilla Firefox
Internet - Mozilla
Installed
REMOVE

Mozilla Thunderbird
Communication - Mozilla
Update available
UPDATE

Skype
Communication - Microsoft
Installed
REMOVE

TextWrangler
Productivity - Bare Bones
Installed
REMOVE

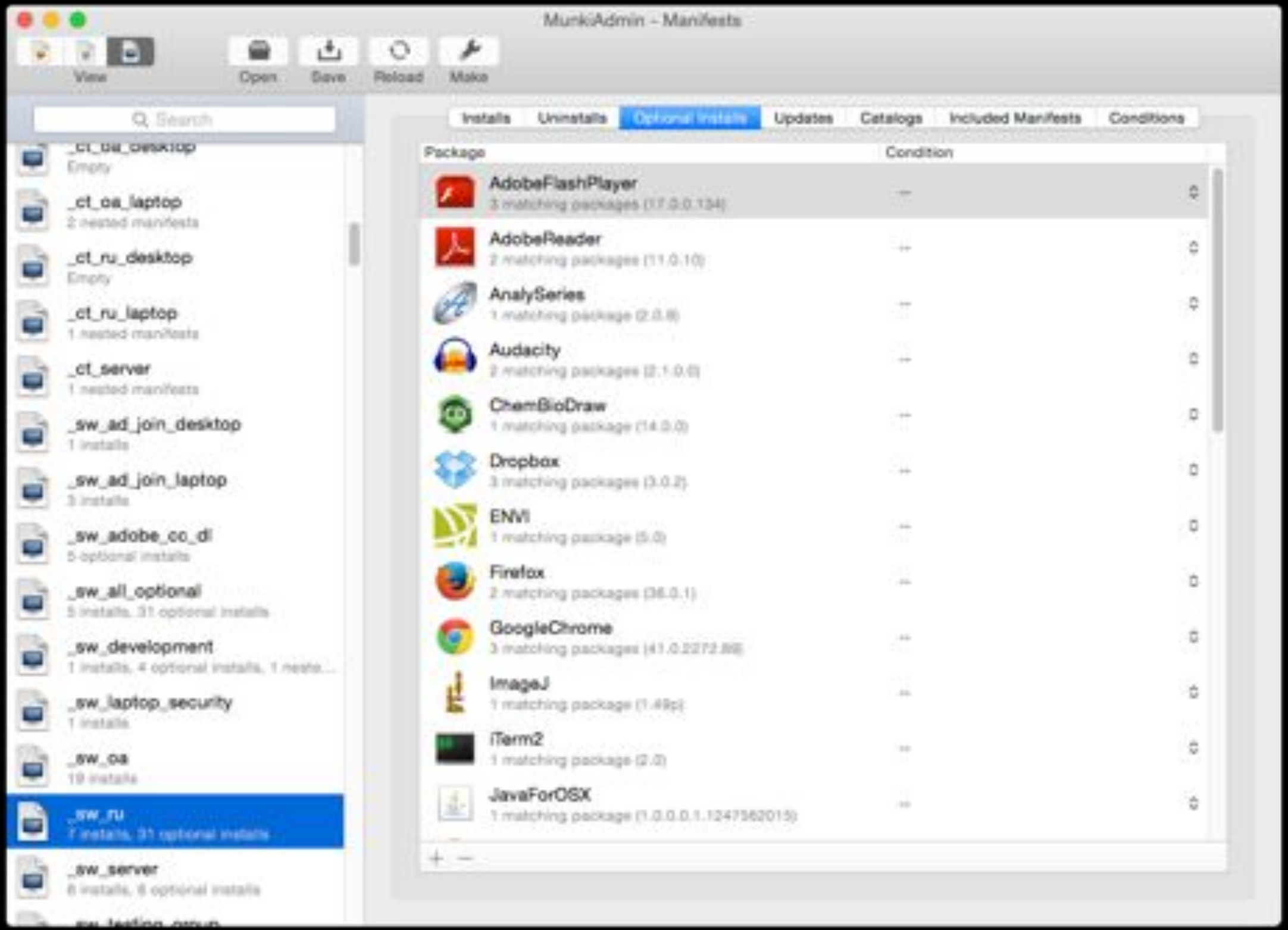
ThinLinc Client
Utilities - Cendio
INSTALL

VLC
Media - VideoLAN
Installed
REMOVE

XQuartz
Utilities
Installed
REMOVE

Categories

- Communication
- Internet
- Internet & Cloud
- Media
- Organization
- Productivity
- Utilities


MunkiAdmin – Manifests
View
Open
Save
Reload
Make
Search
Installs
Uninstalls
Optional Installs
Updates
Catalogs
Included Manifests
Conditions
Package
Condition
AdobeFlashPlayer
3 matching packages (17.0.0.134)
AdobeReader
2 matching packages (11.0.10)
AnalySeries
1 matching package (2.0.8)
Audacity
2 matching packages (2.1.0.0)
ChemBioDraw
1 matching package (14.0.0)
Dropbox
3 matching packages (3.0.2)
ENVI
1 matching package (5.0)
Firefox
2 matching packages (36.0.1)
GoogleChrome
3 matching packages (41.0.2272.89)
ImageJ
1 matching package (1.49p)
iTerm2
1 matching package (2.0)
JavaForOSX
1 matching package (1.0.0.0.1.1247362015)
_ct_oa_desktop
Empty
_ct_oa_laptop
2 nested manifests
_ct_ru_desktop
Empty
_ct_ru_laptop
1 nested manifests
_ct_server
1 nested manifests
_sw_ad_join_desktop
1 installs
_sw_ad_join_laptop
3 installs
_sw_adobe_cc_dl
5 optional installs
_sw_all_optional
5 installs, 31 optional installs
_sw_development
1 installs, 4 optional installs, 1 neste...
_sw_laptop_security
1 installs
_sw_oa
19 installs
_sw_ru
7 installs, 31 optional installs
_sw_server
6 installs, 6 optional installs

AutoPkgr

Install | Repos & Recipes | Schedule | Folders & Integration

Repositories

Filter repos by name

- [x] https://github.com/autopkg/recipes.git
- [ ] https://github.com/autopkg/nmcspadden-recipes.git
- [ ] https://github.com/autopkg/keeleysam-recipes.git
- [ ] https://github.com/autopkg/hjuutilainen-recipes.git
- [ ] https://github.com/autopkg/cgerke-recipes.git
- [x] https://github.com/autopkg/timsutton-recipes.git
- [x] https://github.com/autopkg/jleggat-recipes.git

Add a repo URL manually: https://github.com/autopkg/recipes.git Add

Recipes

Filter recipes by name

[ ]	Audacity.download	com.github.timsutton.download.audacity
[x]	Audacity.munki	com.github.timsutton.munki.audacity
[ ]	AuraliaCloud.download	com.github.hansen-m.download.AuraliaCloud
[ ]	AutoDMG.download	com.github.timsutton.download.AutoDMG
[ ]	AutoDMG.munki	com.github.timsutton.munki.AutoDMG
[ ]	AutoPkgGitMaster.pkg	com.github.autopkg.AutoPkgGitMaster
[ ]	BBEdit.download	com.github.autopkg.download.bbedit

Search for more recipes...

munkireport.isys.bris.ac.uk

MunkiReport | Dashboard | Reports | Listings | Logout gigni

Active clients

142 This mo | 122 This wk | 3 Today | 19 Last hour

Inactive clients

30 > 3 months | 18 Last mo | 20 Last wk

Munki

5 Errors | 107 Warnings | 74 Pending | 15 Installed

Disk status

180 Under 80% | 5 Over 80% | 0 Over 90%

Installed Memory

98 8GB + | 81 4GB + | 11 < 4GB

Bound to a Directory Service

124 Bound | 61 Not Bound

New clients

8212665	10 hours ago
IT032414	5 days ago
IT031792	7 days ago

Pending Apple Updates

Security Update 2015-002 1.0	
iTunes 12.1	
Command Line Tools (OS X 10.10) 6.2	
Digital Camera RAW Compatibility Update 6.03	
HP Printer Software Update 3.0	

Pending Installs

Office 2011 14.4.8 Update 14.4.8	
Google Chrome 41.0.2272.89	
Google Chrome 41.0.2272.76	
Check Local Admin 20150209.3	
Adobe Acrobat XI Pro Update 10.1.13 10.1.13	

Munki versions

2.2.0.2399	119

Warranty status

Expires in 30 days (Invalid serial number)

Filevault 2 status

FileVault 2 Encryption Not Enabled

MunkiWebAdmin Overview Reports Catalogs Manifests Inventory Licenses Admin Logout munkiwebadmin

Section:

manifest name | Search

Hint: you can use shell-style wildcards in searches for 'fuzzy' matches.

Manifests 234

Name	User
_cg_ad_join	
_cg_ad_join_laptop	
_cg_adobe_acrobat_xi_pro	
_cg_adobe_cc_dl	
_cg_adobe_cs6_ds	
_cg_adobe_dreamweaver_12	
_cg_adobe_illustrator_cs6	
_cg_all_optional	
_cg_eduroam	
_cg_ru	
_cg_ru_ad	
_cg_ru_eduroam	
_cg_testing_group	
_cg_ze	
_cg_ze_ba_music_s1	
_cg_zb	

+ New manifest | Delete manifest

_SW_ru

Edit

User

Catalogs

Included Manifests

Managed Installs

munkireport
munkitools
munkitools_core
munkitools_launchd
munkiwebadmin_scripts
Office2011
SCEP

Managed Uninstalls

Managed Updates

Optional Installs

AdobeFlashPlayer
AdobeReader
ArielySeries
Audacity
ChemBioDraw
Dropbox
ENVI
Firefox
GoogleChrome
ImageJ
iTerm2
JitsiForOSX

Managed Software Center

Software Categories My Items Updates Search

University of BRISTOL

Mac Software Centre

All items

Adobe Flash Player
Plug-ins – Adobe
Installed

Adobe Reader
Productivity – Adobe

AnalySeries
Scientific – Didier Pallard

Audacity
Audio-Visual – Audacity

Canon P5 Printer Driver
UOB Tools – Canon
Installed

ChemBioDraw
Scientific
Installed

Dropbox
Cloud – Dropbox
Installed

Eduroam Machine-Authentic
Uncategorized

EndNote X7
Uncategorized

ENVI 5.0
Scientific

Evernote
Cloud – Evernote

FreeFileSync
Utilities – Zenju

GIMP
Image Processing – GIMP

Google Chrome
Internet – Google
Installed

Google Drive
Uncategorized
Installed

Handbrake
Audio-Visual – Handbrake

HP Printer Drivers
Drivers
Installed

ImageJ
Image Processing – Wayne Rasband

Quick Links

How to use Software Center
UoB Mac Advice & Support
Report a problem

Apple support
Mac
OS X
Mac Apps

Categories

Audio-Visual
Cloud
Communication
Developer
Drivers
Image Processing
Internet
Mathematics
Plug-ins
Productivity
Programming
Scientific
UOB Tools
Uncategorized
Utilities

- No enterprise, resilient, high availability Mac servers
- Move the Munki live services to VM:
    - Munki repository
    - Munki-enroll
    - MunkiWebAdmin
    - MunkiReport-PHP
    - Crypt-Server
    - Munki-Trello

iptables:

- We need to edit iptables:

```
$ nano /etc/sysconfig/iptables
```

- The following lines need to be added to allow HTTP access to the ports we will use:

```
-A INPUT -m state --state NEW -m tcp -p tcp --dport 80 -j ACCEPT
-A INPUT -p udp -m udp --dport 137 -j ACCEPT
-A INPUT -p udp -m udp --dport 138 -j ACCEPT
-A INPUT -m state --state NEW -m tcp -p tcp --dport 139 -j ACCEPT
-A INPUT -m state --state NEW -m tcp -p tcp --dport 443 -j ACCEPT
-A INPUT -m state --state NEW -m tcp -p tcp --dport 445 -j ACCEPT
#Ports for Networker
-A INPUT -s anubis.bris.ac.uk -j ACCEPT
-A INPUT -s bastet.isys.bris.ac.uk -j ACCEPT
```

- These should be added after the existing line referring to port 22 (SSH).
- Then restart the iptables service:

```
$ service iptables restart
```

SELinux:

- SELinux needs to be configured or disabled in order to see web pages:

```
$ nano /etc/sysconfig/selinux
```

- Change:

```
SELINUX=enforcing
```

- to

```
SELINUX=permissive
```

- To make the change without rebooting:

```
$ setenforce 0
```

Extra tools required:

```
$ yum install -y git python-setuptools wget samba php php-pdo php-xml php-ldap cifs-utils mod_wsgi
$ easy_install virtualenv
```

- Also Networker for backups: (need to inform Backup Services if setting up a new server)

```
yum install lgtoclnt
```

- Edit /etc/hosts - add the following line:

```
137.222.10.17   anubis.bris.ac.uk   anubis
```

Setting up Munki Repo:

- Add a user. This will be used to connect to the repository from the Mac server, It will also be used my munkiwebadmin:

```
$ useradd munkiwebadmin
$ groupadd munki
$ usermod -G munki munkiwebadmin
$ usermod -G munki apache
$ smbpasswd -a munkiwebadmin
```

- Password stored in the KeePass database.
- Add the repo folders: in this case, I'm copying the contents over from the existing repository:

```
$ cd /var/www/html/
$ scp -r it-zone-d@deploystudio.isys.bris.ac.uk:/Users/Shared/munki_repo .
```

- If creating fresh folders, do the following:

```
$ cd /var/www/html/
$ mkdir munki_repo
$ mkdir munki_repo/catalogs
```

TION CAUTION
KEEP
CALM
AND
ATTACK

Crypt

registry.hub.docker.com

docker

What is Docker? Use Cases Try It! Browse Install & Docs Log In Sign Up

AUTOMATED BUILD REPOSITORY

Updated 3 months, 2 weeks ago

macadmins / crypt-server

Pull this repository: docker pull macadmins/crypt-server

No description set

☆ 1 3 164

Information | Dockerfile | Build Details | Tags

Crypt is a system for centrally storing FileVault 2 recovery keys. It is made up of a client app, and a Django web app for storing the keys.

This Docker image contains the fully configured Crypt Django web app. A default admin user has been preconfigured, use admin/admin to login. If you intend on using the server for anything semi-serious it is a good idea to change the password or add a new admin user and delete the default one.

Changes in this version

- 10.7 is no longer supported.
- Improved logging on errors.
- Improved user feedback during long operations (such as enabling FileVault).

Client

Properties

2014-08-05 20:52:16

macadmins

Settings

Webhooks

Build Details

Source Project Page

Source Repository

Install Docker

```
$ yum install epel-release
$ yum install docker-io
$ service docker start
$ chkconfig docker on
```

Create Crypt Database

```
$ mkdir -p /usr/local/crypt_data/db
$ docker pull postgres:9.4
$ docker run -d \
  --restart=always \
  --name="postgres-crypt" \
  -v /usr/local/crypt_data/db:/var/lib/
postgresql/data \
  postgres
```

Download Crypt db setup

```
$ mkdir -p ~/crypt-server
$ curl -s https://
raw.githubusercontent.com/macadmins/
crypt-server/master/setup_db.sh -o ~/
crypt-server/setup_db.sh
```

Edit setup.sh

```
#!/bin/sh
DB_NAME=crypt
DB_USER=cryptadmin
DB_PASS=crypt*is!!Awesome**
```

Run setup.sh

```
$ chmod +x ~/crypt-server/setup_db.sh
$ ~/crypt-server/setup_db.sh
```

Run Crypt-Server

```
$ docker pull macadmins/crypt-server
$ docker run -d --name="crypt-server" \
  --restart=always \
  -p 8089:8000 \
  --link postgres-crypt:db \
  -e ADMIN_PASS=pass \
  -e DB_NAME=crypt \
  -e DB_USER=cryptadmin \
  -e DB_PASS=crypt*is!!Awesome** \
  macadmins/crypt-server
```

Create /etc/httpd/conf.d/crypt-server.ssl.conf

```
<VirtualHost 172.16.39.69:443>
   ServerName mac-crypt.isys.bris.ac.uk
   ProxyPass / http://0.0.0.0:8089/
   ProxyPassReverse / http://0.0.0.0:8089/
   RedirectMatch ^/$ https://mac-crypt.isys.bris.ac.uk
   LogLevel warn
   CustomLog /var/log/httpd/crypt-access.log combined
   ErrorLog /var/log/httpd/crypt-error.log
   SSLEngine on
   SSLProtocol all -SSLv2 -SSLv3
   SSLCertificateFile /etc/ssl/certs/munki/munkivm.isys.bris.ac.uk.crt
   SSLCertificateKeyFile /etc/ssl/certs/munki/MunkiVM.isys.bris.ac.uk.key
   SSLCertificateChainFile /etc/ssl/certs/munki/munki-pem-chain-file.pem
</VirtualHost>
```

mac-crypt.isys.bris.ac.uk

TOPdesk GMail GCal MacVT Wiki ZD UoB Buy OSX Print ES Maths Unix PC GMaps News Travel Events German

TOPdesk - I... Inbox (0) - gl... The Universit... Saunton (retreg) Munki Serve... Munki Admi... Bristol Unive... Clearing a fa... Crypt

Crypt Approve requests admin

Show 20 entries Search:

Serial Number	Computer Name	User Name	Date Stored	
W88454WZ1B0	it013544	gigrp	Dec. 1, 2014, 12:24 p.m.	info
W88454WZ1B0	it013544	gigrp	Dec. 2, 2014, 9:19 a.m.	info
W88454WZ1B0	it013544	gigrp	Dec. 2, 2014, 11:27 a.m.	info
C02MR1PDF9YV	it031540	gigrp	Dec. 1, 2014, 6 a.m.	info

Showing 1 to 4 of 4 entries ← Previous 1 Next →

Updating a Docker image

```
$ docker pull macadmins/crypt-server
$ docker stop crypt-server
$ docker rm crypt-server
```

Run Crypt-Server

```
$ docker run -d --name="crypt-server" \
  -p 8089:8000 \
  --restart=always \
  --link postgres-crypt:db \
  -e ADMIN_PASS=pass \
  -e DB_NAME=crypt \
  -e DB_USER=cryptadmin \
  -e DB_PASS=crypt*is!!Awesome** \
macadmins/crypt-server
```

Munki-Trello

Set up a Trello board

- Create a service Trello account
- Create Munki-Trello Board
- Create the following lists in the Munki-Trello board:
    - To Development
    - Development
    - To Testing
    - Testing
    - To Standard
- https://trello.com/1/authorize?key=BOARDKEY&name=munki-trello&expiration=never&response_type=token&scope=read,write

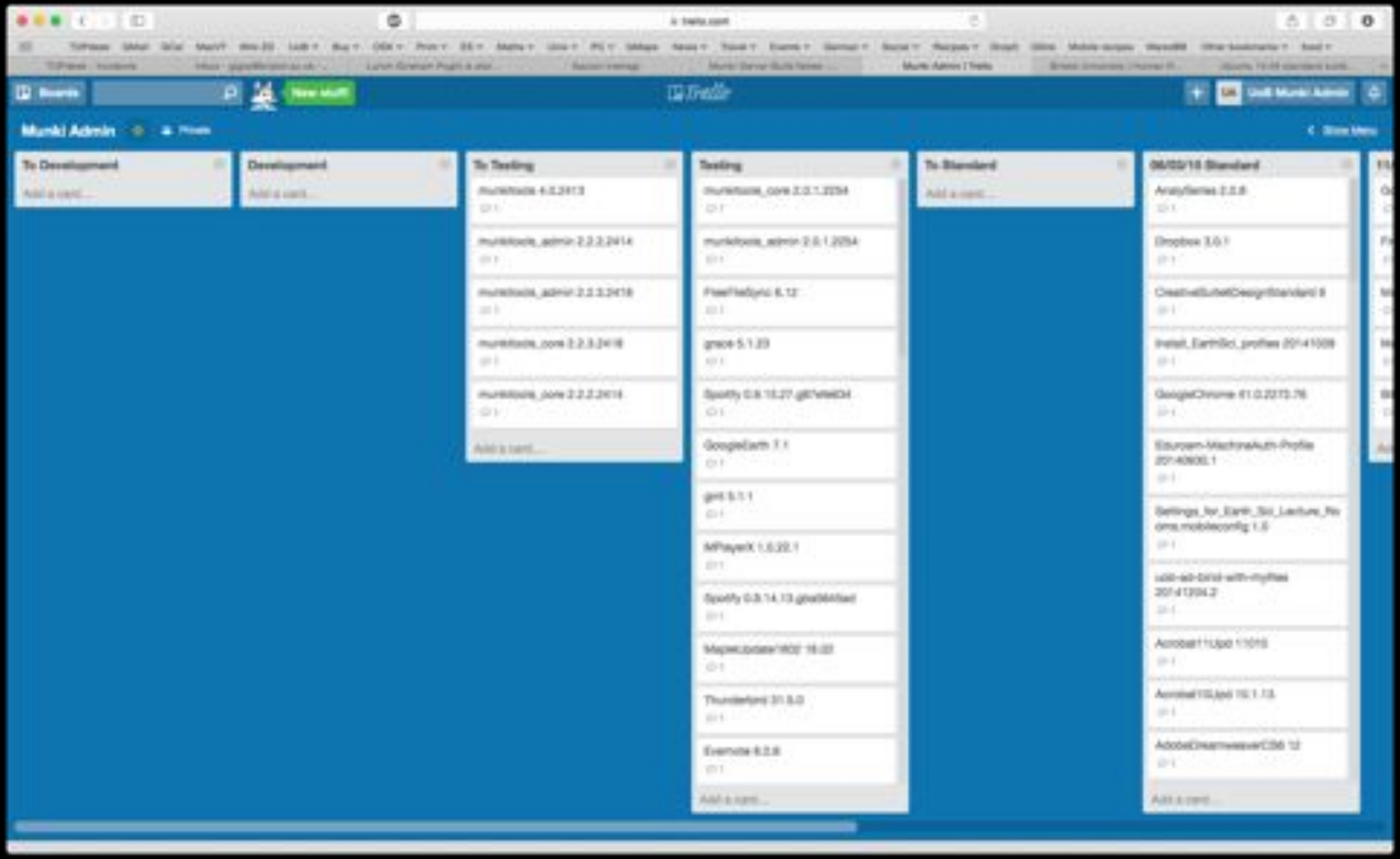
Pull the munki-trello docker image

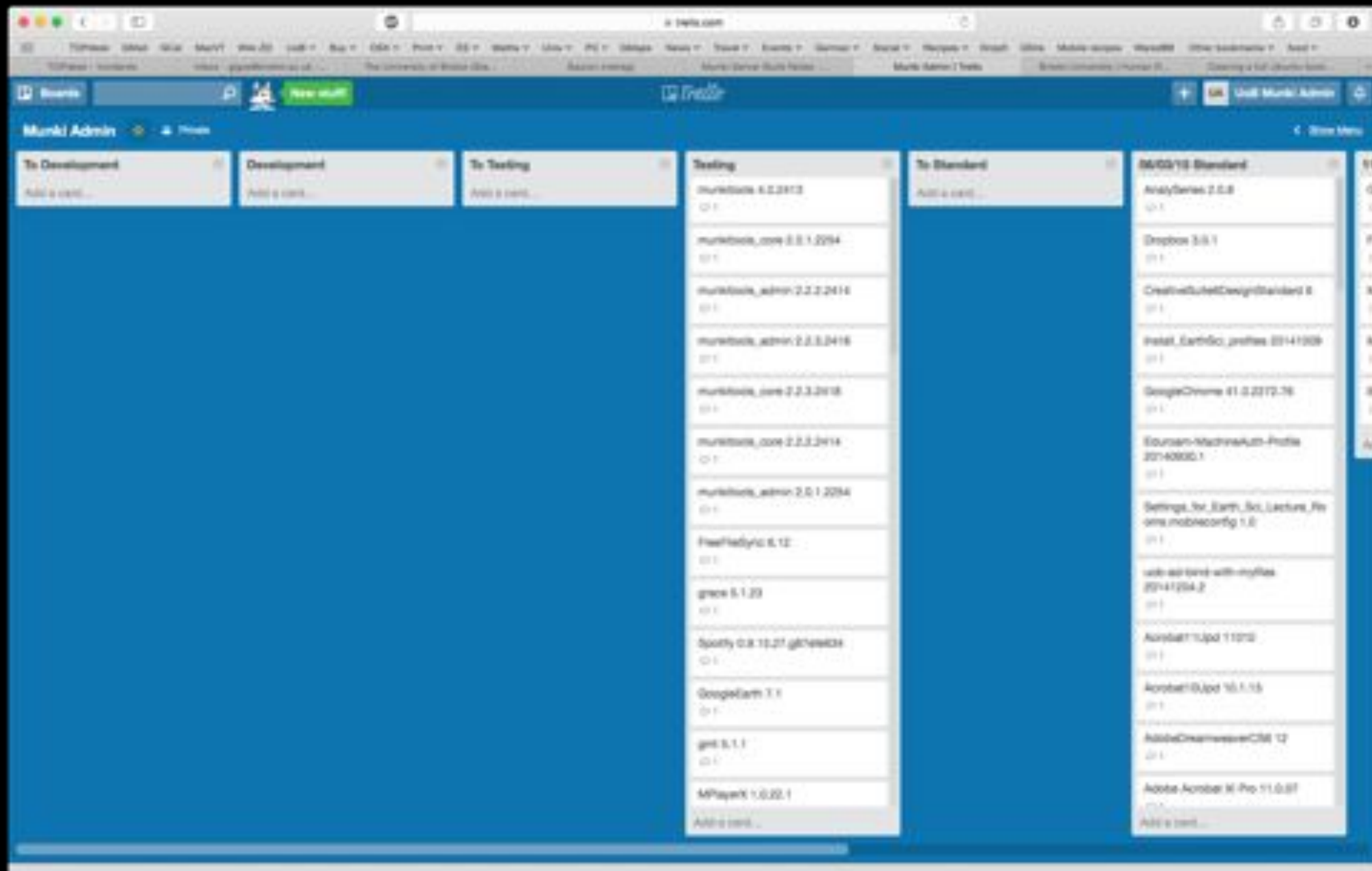
```
$ docker pull pebbleit/munki-trello
```

Run the munki-trello docker image

```
$ docker run --rm \
  -v /var/www/html/munki_repo:/munki_repo \
  -e DOCKER_TRELLO_KEY=1234567890 \
  -e DOCKER_TRELLO_TOKEN=1234567890123456789 \
  -e DOCKER_TRELLO_BOARDID=CoqGar6V
  pebbleit/munki-trello
```

- Put this in a script in /etc/cron.hourly to automate


Munki Admin
To Development
Development
To Testing
Testing
To Standard
06/05/16 Standard
Add a card...


Munki Admin
To Development
Development
To Testing
Testing
To Standard
06/03/10 Standard

MunkiAdmin - Catalogs

View | Open | Save | Reload | Make

Search | Package Name

standard
100 packages enabled

testing
98 packages enabled

		Name	Display Name	Version
☐		munkireport	Munkireport Install and config	2.0.11.2
☐		munkitools	Managed Software Update	3.6.0.1864
☐		munkitools	Managed Software Center	4.0.2245
☐		munkitools	Managed Software Center	4.0.2346
☑		munkitools	Managed Software Center	4.0.2413
☐		munkitools_admin	Managed Software Update a...	1.0.0.1864.0
☑		munkitools_admin	Managed Software Center ad...	2.0.1.2254
☐		munkitools_admin	Managed Software Center ad...	2.2.0.2397
☐		munkitools_admin	Managed Software Center ad...	2.2.0.2399
☑		munkitools_admin	Managed Software Center ad...	2.2.2.2414
☑		munkitools_admin	Managed Software Center ad...	2.2.3.2418
☐		munkitools_core	Managed Software Update co...	1.0.0.1864.0
☑		munkitools_core	Managed Software Center co...	2.0.1.2254
☐		munkitools_core	Managed Software Center co...	2.2.0.2397
☐		munkitools_core	Managed Software Center co...	2.2.0.2399
☑		munkitools_core	Managed Software Center co...	2.2.2.2414
☑		munkitools_core	Managed Software Center co...	2.2.3.2418
☐		munkitools_launchd	Managed Software Update la...	0.8.0.1
☐		munkitools_launchd	Managed Software Center lau...	2.0.0.1969
☐		munkiwebadmin_scripts	MunkiWebAdmin Scripts	2014.11.20
☑		Music-S1-Login-Script	Music-S1-Login-Script	20150210
☐		Numbers	Numbers	3.5
☐		Office2011	Microsoft Office for Mac 2011	14.3.0
☐		Office2011_update	Office 2011 14.1.0 Update	14.1.0
☐		Office2011_update	Office 2011 14.4.3 Update	14.4.3
☐		Office2011_update	Office 2011 14.4.4 Update	14.4.4

Munki-enroll

Dockerfile

```
# munki-enroll (grahampugh fork) Dockerfile
# Version 0.1

FROM hunty1/munki-docker

MAINTAINER Graham Pugh (g.r.pugh@gmail.com)

RUN apt-get update && \
    apt-get install -y git && \
    apt-get clean
```

Start docker images

```
$ docker build -t grahamrpugh/munki-enroll .

$ docker run -d --name munki-data --entrypoint
bin/echo grahamrpugh/munki-enroll Data-only
container for munki

$ docker run -d --name munki --volumes-from
munki-data -p 8088:80 -h munki grahamrpugh/
munki-enroll
```

setup.sh

```
#!/bin/bash

# remove existing folder and use git to clone the
munki-enroll scripts into the munki-data volume

docker exec munki rm -rf /munki_repo/munki-enroll
docker exec munki git clone https://github.com/
grahampugh/munki-enroll.git /munki_repo/munki-enroll
```

Run setup.sh

```
$ ./setup.sh
Cloning into '/munki_repo/munki-enroll'...
```

```
$ docker exec -t -i munki /bin/bash
root@munki:/# cd /munki_repo/munki-enroll/
root@munki:/munki_repo/munki-enroll# ls
LICENSE  README.md  cfpropertylist-1.1.2  enroll.php
```

Links

- **MacAdmins @ PSU Conference:**
  http://macadmins.psu.edu

- **MacAdmins Github:**
  https://github.com/macadmins - Docker images for Munki, Sal, Crypt-Server, MunkiReport-PHP, and more

- **Munki-Trello Docker image:**
  https://registry.hub.docker.com/u/pebbleit/munki-trello/

- **Munki-Enroll Docker image:**
  https://registry.hub.docker.com/u/grahamrpugh/docker-munki-enroll/

- **Funnel Cake:**
  http://toriavey.com/toris-kitchen/2013/06/funnel-cakes-history-recipe/