

# Documentation

What are you afraid of?

# Mat X

**@macvfx**

IT Consultant

# Why document?

- Bring sanity to ourselves
- Share knowledge with others

# Lesson # 1

Document for yourself.

No, really?!

Do you want to ever go  
on vacation?

Don't get hit by a bus



What are we afraid of?



# Lesson # 2

Document for others

SysAdmin or IT  
consultant?

# What do we document?

- Computers
- Network
- Software
- Workflow

# What happens if we don't ?

- If there's no documentation
- What if there is a doc but it's not good
- What if it can't be documented

# Impossible!

- The system is too complex to document
- No one can do it
- We've hired consultants for the last 6 months
- Visio is the map



# Discovery

- What are the systems in place?
- What is the workflow?

/Library/Scripts/

/usr/local/bin

~/bin

Carbon Copy Cloner

plists

Rsync

shell scripts

launchd

python

How do we document all that?!

# Bash

```
% history > ~/saved-cli-'date'.txt
```

```
hdiutil create -srcfolder /Library/Scripts  
~/m0r3-scripts-`date`.dmg
```



# Blogs

## Der Flounder

Seldom updated, occasionally insightful.

[About](#)[Contact](#)

### Automating the setup of OS X Server on El Capitan and Yosemite

October 29, 2015 rtrouton

[Leave a comment](#)

As part of the development of Mac OS X, Apple has also developed [Mac OS X Server](#) as a way to provide access to both additional services on OS X and the management tools needed to administrate those services. While Mac OS X and Mac OS X Server used to be separate operating systems, Apple combined them into one release re-branded as OS X Server. This post will cover specific services and management tools into an [OS X Server](#) [App Store](#).

As part of the move to an application-based installation procedure from OS X Server: [The ability to automate its setup entirely](#)

In order to run the initial setup of OS X Server, the following

1. Log into the Mac using an account with administrator rights
2. Launch **/Applications/Server.app**



## OS X Dominion: Mastering OS X Management

## Introducing Facebook's AutoPkg Script

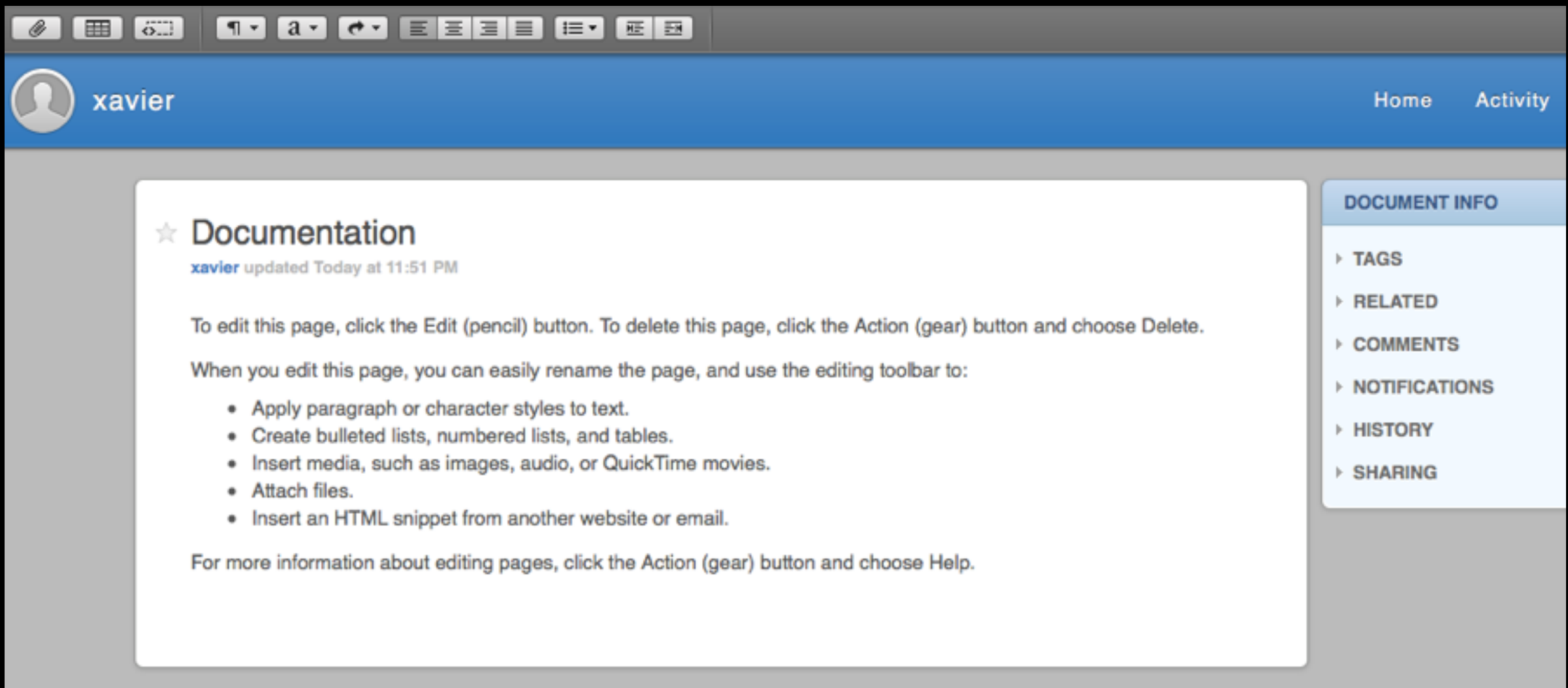
### AutoPkg Wrapper Scripts

There are myriad [AutoPkg](#) wrapper scripts/tools available out there:



# Wiki

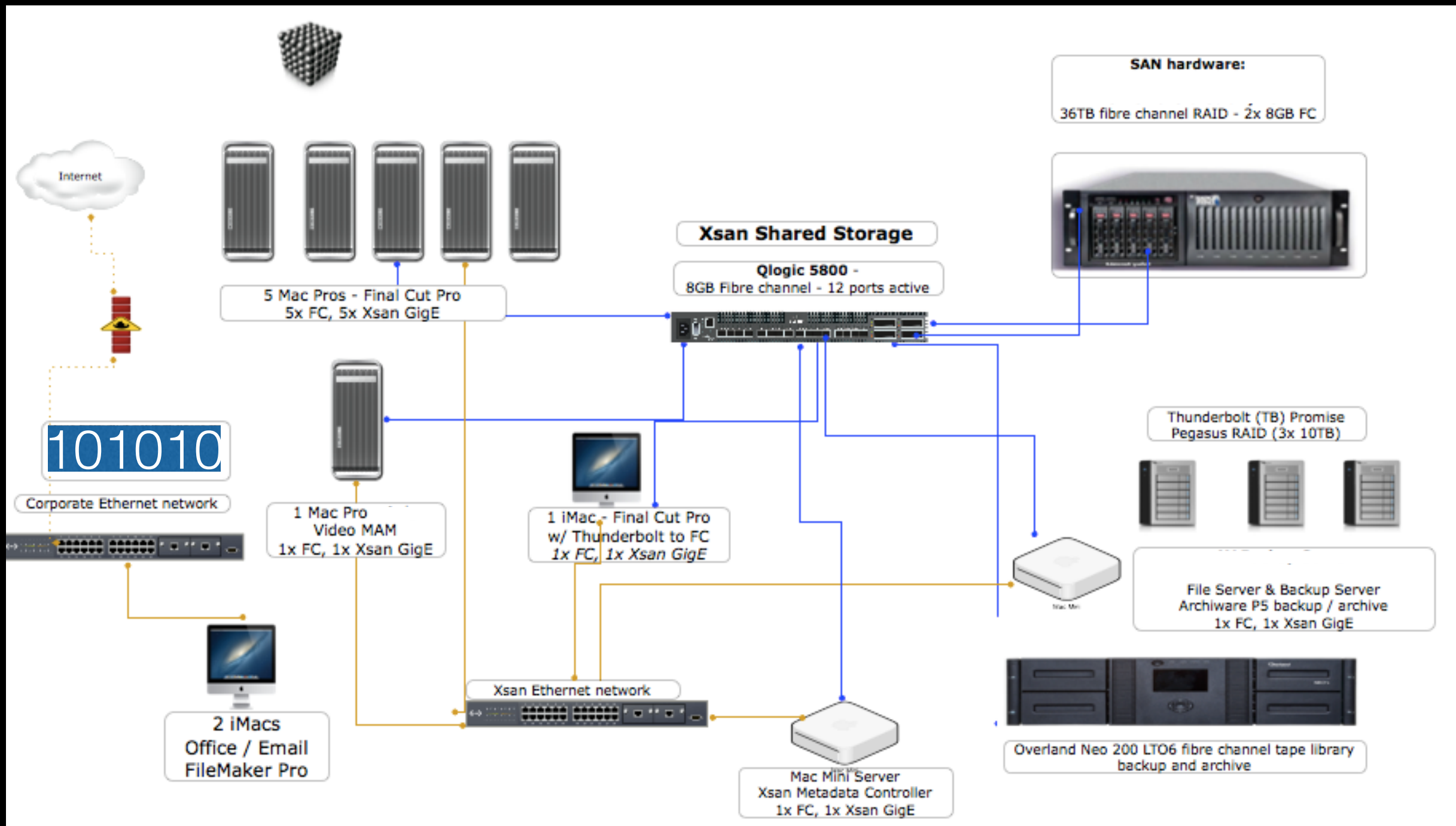
OS X + Server.app



# Make pretty pictures

- Omnigraffle
- Illustrator

# All your SAN



# Ticket systems

- Redmine
- Zen desk
- Web help desk

# Redmine

Overview, Activity, Issues, Wiki, etc

The screenshot shows the Redmine interface for a project named 'WatchmanMonitoring'. The top navigation bar includes a search field and a dropdown menu currently set to 'WatchmanMonitoring'. Below this is a secondary navigation bar with tabs for Overview, Activity, Issues, New issue, Gantt, Calendar, News, Documents, Wiki, Files, Repository, and Todos. The 'Overview' tab is selected.

The main content area is titled 'Overview' and features a '+ New subproject' button. It is divided into three columns:

- Issue tracking:** A box containing a list of issue types and their counts: Task: 8 open / 8, Bug: 0 open / 0, Feature: 0 open / 0, and Support: 0 open / 0. At the bottom of this box are links for 'View all issues', 'Calendar', and 'Gantt'.
- Members:** A box with a group icon and the title 'Members'. It lists the project's roles and members: Manager: Scott AutomationGarden Neal and Developer: Mat X, Scott AutomationGarden Neal.
- Spent time:** A box showing a clock icon and the text '1.50 hour'. Below this are links for 'Log time', 'Details', and 'Report'.

# When do we document?

- Continuously!
- During the planning of a new setup
- Discovering facts for an existing setup
- Automatically!

# Lesson # 3

DevOps



# MacDevOps

- Mac IT (Ops) + Dev
- Automation
- Version control
- Repeatable
- Peer review
- Empathy



# GitHub

Wiki, issues, commit messages

The screenshot displays the GitHub web interface for the repository `macvfx/AutoPkg`. The top navigation bar shows the repository name, a status bar indicating "No Uncommitted Changes", and tabs for "History" and "Pull Request". A "Sync" button is visible on the right.

The left sidebar contains a "Filter Repositories" search bar and a list of repositories under the "GitHub" and "Other" categories. The "AutoPkg" repository is selected.

The main content area shows a commit comparison for the `master` branch. The commit list on the left includes:

- Removing download recipes (4 commits)
- Typo fix** (3 commits, highlighted in blue)
- Auto Pkg Munki - Downlo... (8 commits)

The diff view on the right shows the changes for the selected commit. The files being compared are `.gitignore` and `FinalCuLibraryManager.download.recipe`.

**.gitignore** diff:

```
... @@ -0,0 +1,2 @@
1 +
2 + *.txt
```

**FinalCuLibraryManager.download.recipe** diff:

```
... @@ -3,13 +3,13 @@
3 3 <plist version="1.0">
4 4 <dict>
5 5     <key>Description</key>
6 -     <string>Downloads the current release version of
       FinalCuLibraryManager.</string>
6 +     <string>Downloads the current release version of
       FinalCutLibraryManager.</string>
7 7     <key>Identifier</key>
8 -     <string>com.github.autopkg.download.FinalCuLibraryManager</string>
8 +     <string>com.github.autopkg.download.FinalCutLibraryManager</string>
9 9     <key>Input</key>
```



Branch: master ▾

## RsyncVolumes / rsync-backup-XSAN-example-script.sh



macvfx second commit

1 contributor

Executable File | 17 lines (10 sloc) | 578 Bytes

Raw

Blame

History

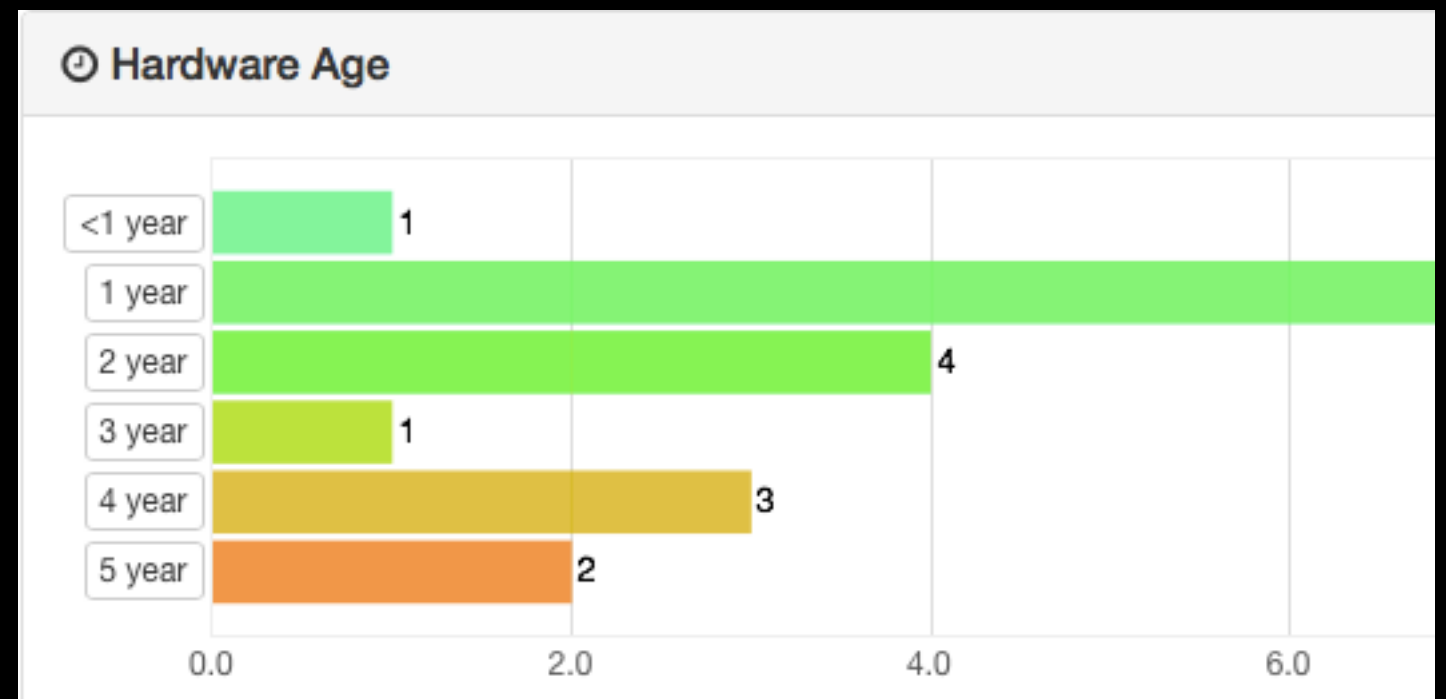
```
1  #!/bin/sh -
2
3  PATH=/bin:/usr/bin:/sbin:/usr/sbin:/opt/local/bin:/usr/local/bin
4  log=/var/log/rsync.Xsan.log.`date -u +%y-%m-%d`
5
6  date > $log
7
8  echo "START rsync Xsan" >> $log
9  /usr/bin/rsync --avP --exclude=".DS_Store" --stats --ignore-errors -h --dry-run "/Volumes/XSAN/MEDIA/"
10 /usr/bin/rsync --avP --exclude=".DS_Store" --stats --ignore-errors -h --dry-run "/Volumes/XSAN/PHOTOS/"
11
12 echo "END rsync Xsan" >> $log
13
14 date >> $log
15
16 echo "Xsan backup DONE" |mail -s "Xsan backup DONE" example@domain.com
```

# Lesson # 4

Sustainability

# Living documentation

- Inventory systems
- Asset management
- Automatic reporting
- Use the systems you have

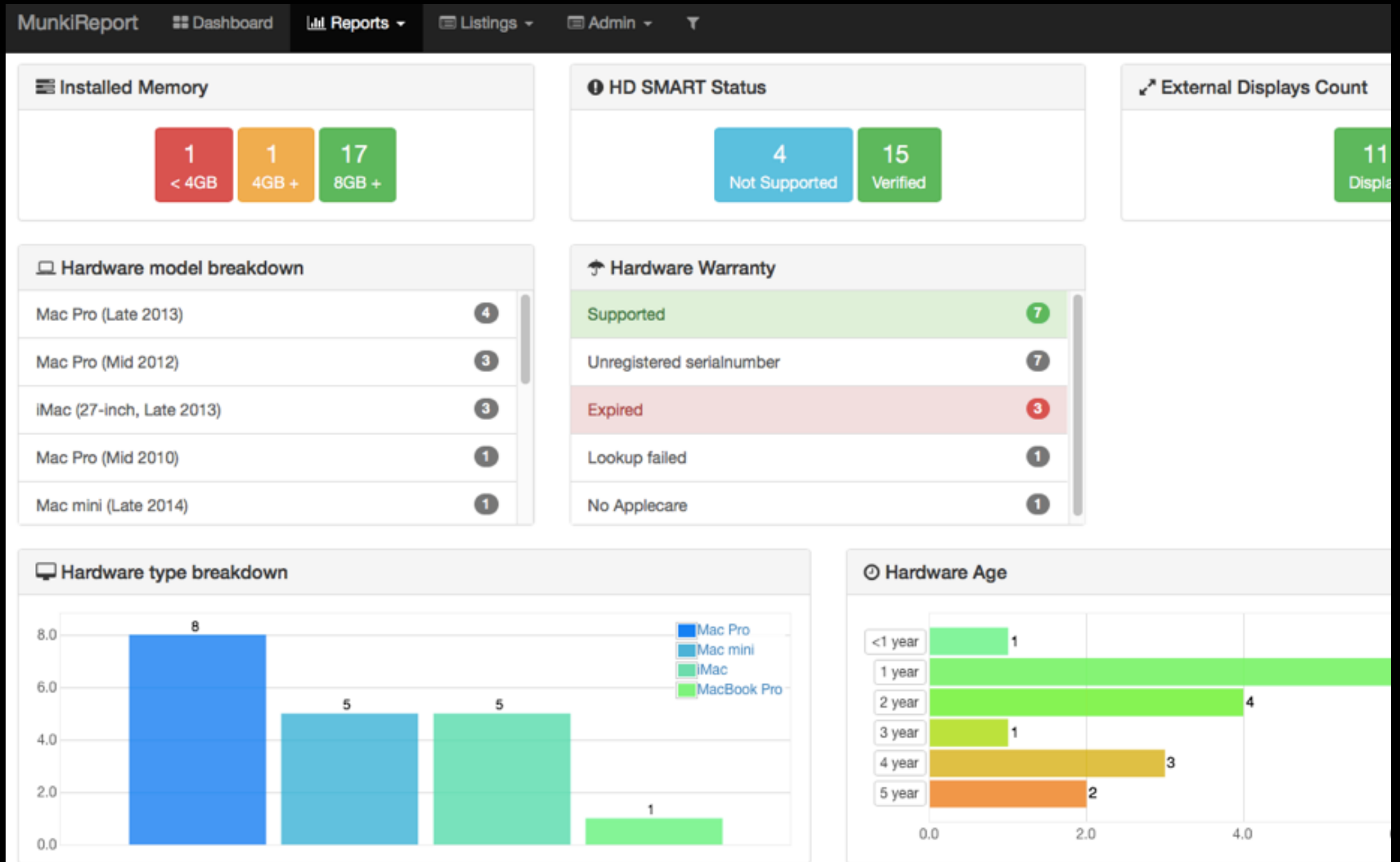


# IT management systems

- Munki
  - Munki Report
- Absolute Manage
- Filewave
- Jamf Casper



# Munki + MunkiReport





# Take it to the cloud!

- Watchman
- Monkeybox



# Computer Overview

Actions ▾

**ladmin's Mac**

Xtest



Missing for 11 months



0 Muted Plugins



0 Expirations

**Last User:** apple**Computer Name:** ladmin's Mac**Group:** Xtest**Serial Number:** VMga78rWVLPD

## INTEGRATIONS

**Monkey Box:**[View in MonkeyBox](#)

## Plugin Results

Notes: 0

History

Edit



### Disk IO Errors

2014-12-22 12:51 AM

[2014-12-22] No recent disk I/O errors were logged.



Actions ▾



### False Mount

2014-12-22 12:51 AM

No False Mounts to report.



Actions ▾



### Kernel Panics

2014-12-22 12:51 AM

There are no panic logs to report.



Actions ▾



### Local IP Address

2014-12-22 12:51 AM

Primary IP: 172.16.4.160 via DHCP on Ethernet (en0)



Actions ▾



### Malware Tests

2014-12-22 12:51 AM

[2014-12-22] No Known Malware Found.



Actions ▾

# Lesson # 5

Improve

# Beyond documentation

- Discovery and Documentation leads to suggestions for improvement
- Where it makes sense replace custom scripts with commercially supported software and/or properly documented config management (e.g. Puppet or Chef)
- Exit plan and ethical Sysadmins / consultants

# Conclusions

- Bring sanity and clarity to all IT systems
- Living systems lead to better documentation
- Happy clients and happy people work well together

# More info:

- <https://macvfx.wordpress.com>
- <https://github.com/macvfx/>
- <http://www.macdevops.ca>