

The L&A Solaris "Sunset"

Jeff Kopmanis (kopmanis@umich.edu)
IT Manager & Javelin Catcher
L&A - Mathematics

LSA Solaris 8 Problems

- * Solaris 8 installation - 2 versions old
- * Syncntree/AFS based managed load
- * Great for servers
- * Excellent for security
- * Desktop environment lacking
- * Grads and Faculty restless

LSA-IT & Dean's Solution

- * "Buy out" Solaris installations
- * Replace with MacOSX or Linux
- * Each Department submitted hardware specs for "Hi" and "Lo" -end machines
- * LSA-IT purchased and distributed machines
- * Deployment Deadline: December 31

Machine Classifications

- * Hi: Sun Ultra 60, Blade 1500, Blade 2000
- * Lo: Sun Ultra 5, 10, Blade 100/150
- * Math had 126 applicable machines

Math Classifications: Apple Macintosh

- * Hi-Mac, 13 machines:
 - * PowerMac G5 1.8GHz x 2, 1GB RAM, SuperDrive (DVD Burner)
 - * 20" Apple Cinema Display
- * Lo-Mac, 100 machines:
 - * iMac G5 17", 1.8GHz, 1GB RAM, SuperDrive

Math Classifications: Dell + RHEL3

- * RedHat Enterprise Linux 3.0
- * Hi-Linux, 3 machines:
 - * Dell Precision 370, 3.6GHz Pentium 4, 1GB RAM, DVD Burner
 - * 19" Dell Flat LCD
- * Lo-Linux, 10 machines:
 - * Dell Optiplex GX280, 3GHz Pentium 4, 1GB RAM, CD Burner
 - * Dell 17" Flat LCD

Math Standards

- * Graphical Mail clients
- * Local Home Directories
- * Links to IFS & LSA AFS on Desktop
- * MS Office or OpenOffice.org
- * TeX/LaTeX support
- * Maple, MATLAB, Mathematica

RedHat Enterprise 3.0

- * Used LSA Proxy Server
- * IT-Commons Initiative: Astronomy, Physics, Math, Geology, LSA-IT
- * Kickstart/Proxy setup
- * Math's Linux Lead:
Roy Bonser (rbonser@umich.edu)

Math-IT iMac “MegaLoad”

Jeff Kopmanis
IT Manager, Mathematics

What we started with

- * 99 Apple iMac G5 17" computers
- * 65 faculty and post-docs with Suns yet to replace
- * LSA SNI Tiger Load
- * MathIT modifications
- * Several LSAIT-authored scripts to assist with automation and batch loading

99 Apple iMac G5 17's

Left in-box to
barcode scan:

Serial Number &
MAC address

for DHCP and
Netboot prep

(Step 6)



NetBoot & DNS Servers

- * Used in-box scans to run Step 7 scripts to load NetBoot server (nil.math)
- * Step 4 script to generate Zone file snippets to cut'n'paste into DNS server (nogo.math)
- * NOW, we unbox them, leaving serial/MAC tag on machine

Prep areas

B069 - Gateway Lab



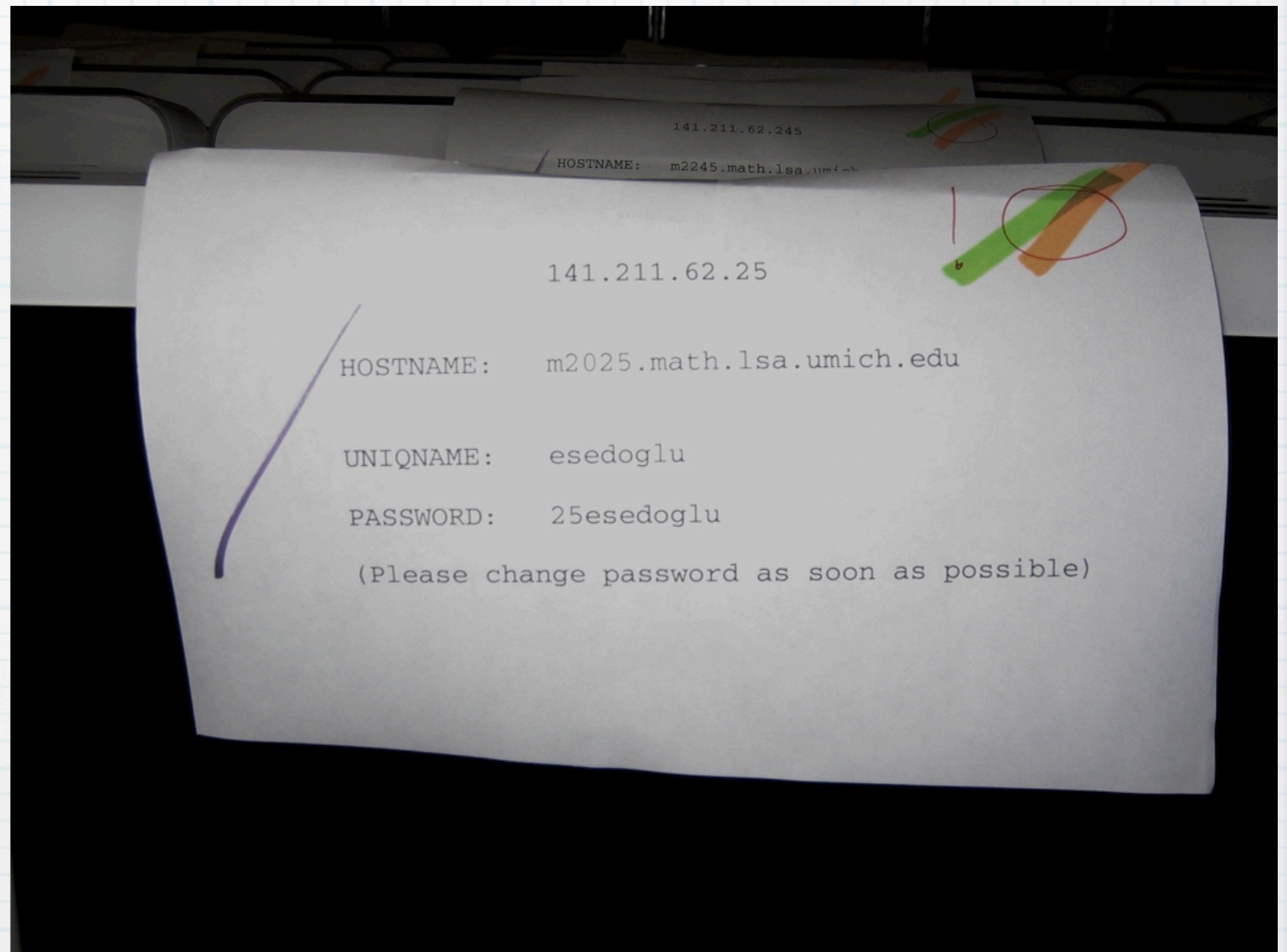
B722 - MathIT



Generate Sheets

- * Used MathTrack database to get current list of faculty in Dept.
- * Pair with free IPs from DNS & DHCP servers
- * Run Step 3 script to generate and print a sheet for each iMac

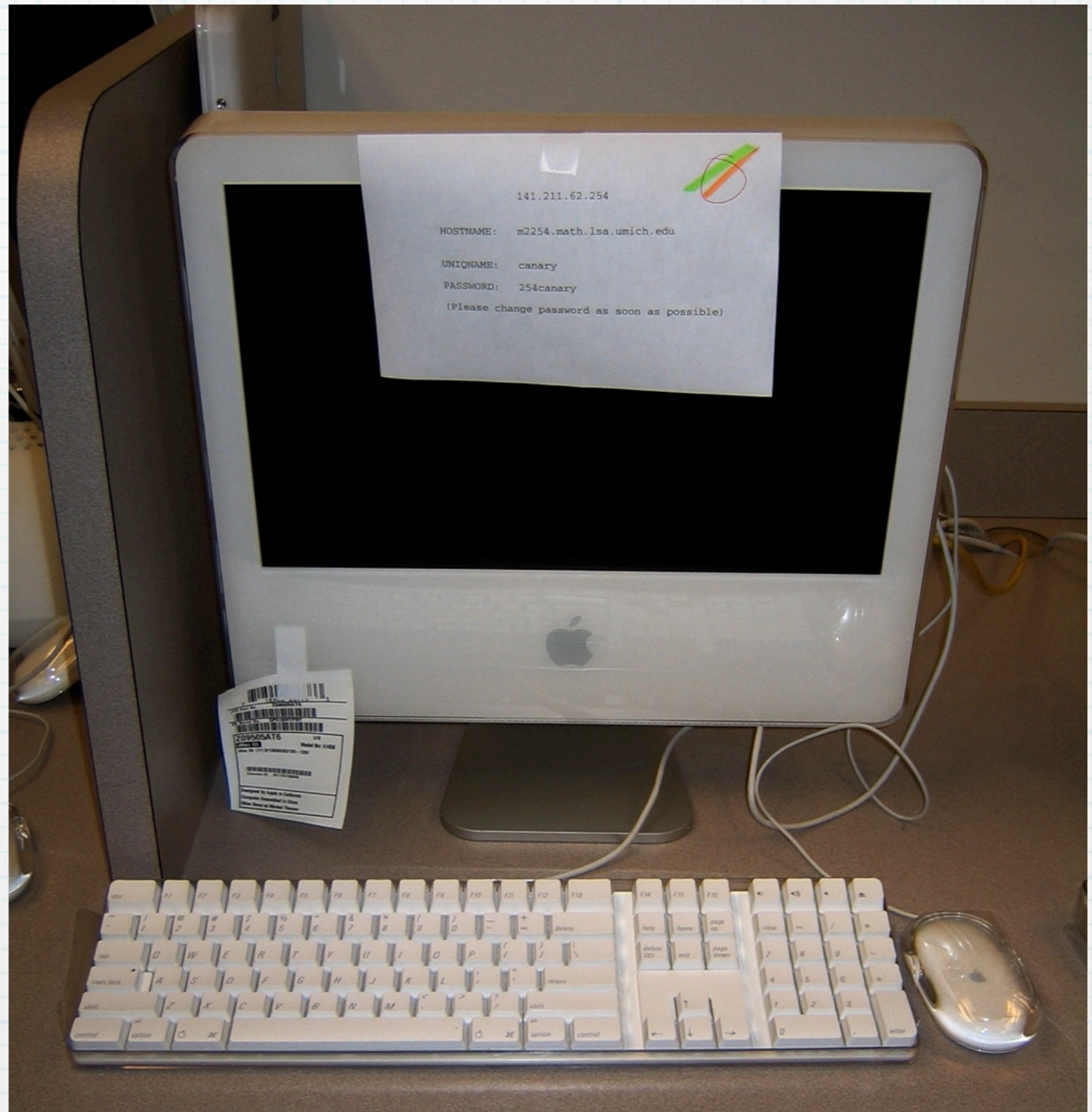
(Step 3)



Register each in DHCP

- * Search LSA NetReg for IP address on sheet
- * Correct hostname and status
- * Scan MAC address from tag left on machine
- * 86 machines in about 60 minutes

(Steps 12 & 13)



Load the Machine

Step 18

- * LSA SNI Tiger
- * Math Faculty Load Set:
 - * Mathematica, MATLAB, Maple, TeX
 - * NeoOffice (Sun StarOffice clone)
 - * Xcode & NAG Fortran
 - * OpenAFS for Tiger (developer build)
 - * Math customizations

Post-load

Steps 21 & 22

- * On first boot, Automatic Inventory Insertion
- * Mark sheet with purple (“done”)
- * Shutdown
- * Move machine to deployable storage (students)



Deployable Storage

- * 57 machines loaded in 6 hours (elapsed)
- * 8 faculty-destined machines left for Monday
- * 38 undetermined destinations (not loaded) + 2 DoA
- * Physical movement was not synced well--80 per day is not unreasonable!

Faculty Deployment

- * By Appointment
- * Ask user to create list of questions, concerns, issues, etc.
- * 60-90 minutes for full-time faculty
- * 30-60 minutes for post-docs or grads
- * Orientation documentation
<http://www.math.lsa.umich.edu/computing/docs/LSA-Orientation.pdf>
- * Goal: 90% functional after appt.

Pre-Deployment

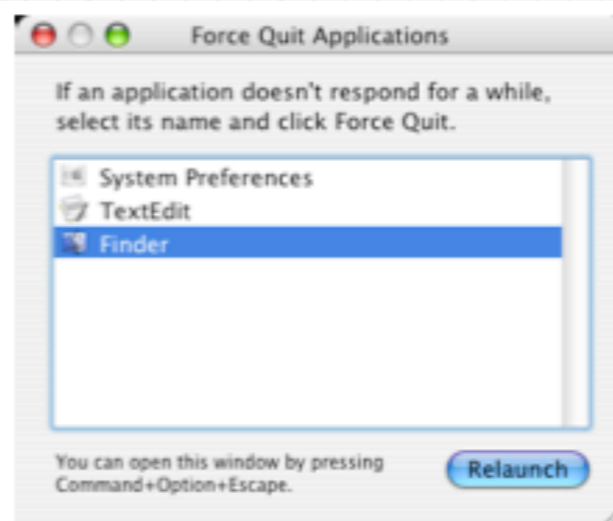
30 minutes before Appt. Time

- * Find machine in storage and set it up
- * Boot and perform Software Update and any other last-minute updates necessary
- * Mark Orientation doc with room number, machine name and install password
- * Remove Serial/MAC tag and mark with VM Tag, unickname, hostname and Room#

Appointments

- * MacOSX Basics
- * Kerberos and AFS usage in MacOSX
- * Mail: from pine to Mail.app
- * TeXshop
- * Faculty-specific questions
- * Leave Orientation doc behind as Quick Reference

Orientation Doc sample



Just select Finder as shown, and hit the Relaunch button.

This will restart Finder and recognize your new AFS tokens so that you're permitted to see your files. This is an odd behavior of Finder and AFS, and we've been working with Apple to address the problem. No solution in sight, but at least they're working on it.

IMPORTANT: Anything you store ON this computer is NOT backed up. Its important that you save or copy things into AFS storage, which is backed up on a daily basis. You can do that by clicking on the links on the desktop...



This is your Solaris space and where you can find all of your files from your Solaris work. We put this symlink on your desktop to make it easy to find and use. It exists in the LSA AFS cell. NOTE that this cell will be merging with the UMICH cell ("IFS") soon, so we've also given a quick icon for it as well.



This is the Kerberos utility. If you log out each day, you probably won't use this much. If AFS tokens expire, use this utility to get new tickets/tokens or renew the old ones. If you do so, you'll likely need to restart Finder (see above)



Safari is your web browser...its built on Mozilla code, but optimized for MacOSX



This is TeXshop, a frontend for the tetex/latex system of typesetting utilities. Note that MacOSX uses PDF in many places, and the TeX environment is no different. It uses the PDF-output versions of everything by default, since the results are very good. I'd suggest trying out and staying in the TeXshop program initially, as its going to be easier to deal with. There are 2 other interesting programs you may want to use:



LaTeX Equation Editor is a utility that lets you test just your equations, to get them right before including them in a larger document. Its handier than re-TeXing a 200 page paper just to see if the equations look right.

Stuff we still need to fix

- * CUPS configuration (CUPS=-AUTOMATIC-) **FIXED**
- * Automated Inventory Insertion (StartupItems timing issue?) **FIXED**
- * portions of ARD 2.2 Client Package (no Admin users) **Solution: Manually configure**
- * Update of Acrobat & KeyAccess packages **UPDATED**
- * Maple 10 update - **UPDATED** - **On LSA-SWL2 TESTING** Folder as Maple.pkg
- * OpenAFS in Tiger - **RC1: Nov 4 - MUCH IMPROVED**

Honorable Mentions

- * Dave Pugh, LSA-IT
- * Roy Bonser, Math-IT
- * Richard White, Math-IT SITC
- * Jeremy Wagner-Kaiser, Math-IT W.S.



Questions?

Jeff Kopmanis
kopmanis@umich.edu