

ULabMin .7.1

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What is ULabMin

- Scripts
- Modifications
- Tools
- Graphics
- Used to manage:
 - Student lab computers
 - Staff/faculty computers
 - Kiosks computers
 - Presentation computers
 - Other “special purpose” computers



Why make it public

- Its free
 - Other solutions cost
- Its all-inclusive (tries to be)
 - Other solutions only do parts of ULabMin
- Many have requested parts of it
 - Beginners need something like this
 - Veteran administrators like to compare, borrow



Drawbacks

- Perhaps not easy...
 - Portability to other lab environments isn't well tested
- There are bugs
 - There are many known bugs, but it still works
- Unorthodox
 - Amateur programming style
 - Contains “Ugly hacks”
 - Many things not “done right”
- Panther only
 - When we upgrade to 10.4, 10.3 will be unsupported



So why do you care (again)

- In spite of the drawbacks, it works
- Its free
 - Only other solutions cost
- Its all-inclusive
 - Other solutions only do parts of ULabMin
- Many have requested parts of it
 - Beginners need something like this
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Exactly what happens

- Uses radmin and iHook
 - Radmin script that uses iHook
 - Script that preps the computer for overloads
 - Script that creates overloads
 - Script that uploads overloads



Exactly what happens

- Lets admin launch radmind many ways
 - Specific time with cron (automated)
 - Logging in as radmind (when logged out)
 - Double click an icon (when logged in)
 - Remotely via a “trigger file” (when not near computer)
 - At startup, from single user mode (when not booted)
 - At startup, when someone tries to force stop radmind
 - Admin can download 1 overload at a time (for testing)



Exactly what happens

- Post-radmin configuration
 - Fixes ByHost folders
 - Turns on AppleTalk
 - Creates crontab (based on IP)
 - Updates prebinding
 - Sets proxy settings
 - Enables journaling
 - More...



Exactly what happens

- Lets admin know machine status (errors)
 - Checks for radmind and other errors
 - Shows graphic in menubar
 - Shows graphic on Loginpanel
 - Saves status in ARD field (for ARD reports)
 - Sends status to web database (using curl)
- Soon we will be adding extra logging features
 - Send kernel panics and other log files to us
 - Add smartdisk status and memtest checking



Exactly what happens

- Increased security
 - Firewall (off by default)
 - Sets OFPW (needs pwd set)
 - Checks OFPW
 - Self security audits
 - Find world writable files/folders
 - SecureIt - Single user mode password (optional)
 - TCP-Wrappers (optional)
 - Modified sudoers list (optional)



Exactly what happens

- Home folder management
 - Each user gets a “clean” home folder
 - Lost and Found created and maintained
 - Cache of home folders to speed up login
- Other
 - Screen saver over loginwindow
 - Currently uses Screen Preserver
 - Manages printer setting cache
 - Controls display resolution



Computer “types”

- Lab Workstation (student/staff/faculty/server)
 - Authenticated
 - Autologin
- Kiosk
 - Authenticated
 - Autologin
 - Authenticated or Autologin Proxy
- Presentation
 - PowerPoint movies
 - Soon we will be adding a Quicktime Broadcaster mode



How to install

- Customize Mac OS X to your heart's content
 - Install OS & all OS updates
 - Install Radmin
 - Create radmin overload or diskimage
 - This is a safty precaution, since the creators of ULabMin are not responsible for time or data lost by those who use it ;)
 - This is also because it is a good idea to have a radmin overload of JUST the OS.
 - Install apps and create radmin overloads of them
 - Setup Directory Services/Kerberos/etc



How to install

- Install 3rd party components
 - Menuversum
 - ncutil 2.x
 - hping2
 - iHook
 - Screen Preserver
 - SecureIt
 - Remove Apple Menu with FruitMenu (good on Kiosk)
 - FruitMenu is the one thing that costs...
 - (Note: some hate APed, and thus they hate FruitMenu...)
- Run ULabMin installer



How to install

- Install optional components
 - System security components
 - /etc/hosts.allow
 - /etc/hosts.deny
 - /etc/rc
 - /etc/rc.boot
 - /etc/sudoers
 - /etc/ttys
 - Etc.
 - Graphic components
 - Boot panel
 - Desktop
 - Etc.



What gets installed

- /Library/Application Support/Menuversum
- /Library/StartupItems/Firewall
- /Library/StartupItems/ULabMin
- /Library/ULabMin
- /System/Library/StartupItems/LoginWindow/StartupParameters.plist
- /etc/ulabmin
- /usr/local/bin/ - 5 scripts



How to configure

- Add your global settings:
 - `/etc/ulabmin/ulabmin_global_config.sh`
 - `/etc/ulabmin/ulabmin_global_config.pl`
- Configure the machine type and other settings
 - `/etc/ulabmin/ulabmin_machine_config.pl`
- Create the crontab settings
 - `/etc/ulabmin/cron_settings`
- Edit firewall settings
 - `/etc/ulabmin/rc_firewall`



How to configure

- Edit a few scripts:
 - /Library/ULabMin/Private/scripts/report_to_master
 - /Library/ULabMin/Private/scripts/set_firmware_password_script.pl
- Edit optional files
 - /etc/hosts.allow
 - Graphic files
- Turn it ON
 - /etc/ulabmin/ulabmin_global_config.sh



Download and more information

- www.macos.utah.edu/ulabmin
 - Download the package
 - Direct links to scripts (to view on web)
 - Scripts explained in detail (yuck)
 - Still building this documentation!



DEMO

- Whee fun!



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Q & A



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