COMPUTERS 4 LITERACY

C4L Ubuntu 12.04 Installation on C4L Laptops

The 2012 "*Computer 4 Literacy*" laptop computers use Intel-based MacBook Pro 1.2, Dell Latitude D620, and Dell Latitude D630 laptops. The following documentation makes all of these models fully functional and customized for specific C4L needs. Some or even all of the individual steps can be applied to other laptop models for desired results. The steps are categorized so that tackling a common problem on a different machine or a solving some desired issue could be achieved by following instructions only in the given topic.

The whole installation is set-up so that after the initial customization (Steps #3-9), the custom copies can be efficiently distributed to other devices (Step #10), thus saving hours of customization work. The newer installation medium is a back-up file as well, serving as an easy re-installation tool for a C4L lab. The C4L labs are optimized for remote areas with non-permanent internet connection or slower connection such as dial-up. Neither network sharing nor server installation are therefore used.

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The following are comparisons of installation and customization times for the C4L'12 laptops:

LAPTOP	SERIES	1st TIME INSTALLATION	STEPS	SUBSEQUENT INSTALLATIONS	STEPS
Mac Book Pro 1.2	C4L'12-100s	Step 1 + 3h30min	1-4, 5a, 5b, 6-9	Step 1 + 0h20min	1, 10 (Mac's #9)
Dell D620	C4L'12-200s	Step 1 + 3h15min	1-4, 5c, 6-9	Step 1 + 0h20min	1, 10 (D620's #9)
Dell D630	C4L'12-300s	Step 1 + 0h30min	1, 10 (D620's #9)	Step 1 + 0h20min	1, 10 (D620's #9)

The following are comparisons of C4L'12 laptops' user accounts and their respective properties:

USERNAME	PASSWORD TO LOG-IN	RUNNING APPLICATIONS	STORING FILES LOCALLY (SAVE)	INTERNET CONNECTION	ADDING EXTRA APPLICATIONS
C4L'##-###	YES	YES	YES	YES	YES
C4L-lab	YES	YES	YES	YES	NO
Guest Session	NO	YES	NO	NO	NO

1: ZERO OUT THE HARDDRIVE, HDD [time varies, based on the HDD size]

-boot Ubuntu live CD through the boot menu (F12 on Dells, Option/Alt on Macs)
-press "Try Ubuntu"
-wait until it launches, then click on the dashboard (top left corner) and run "Disk Utility"
-select the HDD, left-click on a partition, click "Delete Partition"
-repeat the deletion above for all partitions until there is only one with "Device" tag "/dev/sda"
-click on the dashboard (top left), search for the terminal by typing, run 'Terminal' type the following
    -sudo fdisk -l (this lists the drives)
    -sudo swapoff (this assures that no binary digits, bits, are skipped)
    -sudo dd if=/dev/zero of=/dev/sda (this writes zero on each bit)
-after quite some time, the process ends and the terminal writes a message with the total time in seconds
    NB: depending on the size of the HDD, the process might take a couple of hours
-check if the HDD was zero-ed out successfully by typing the following (in the terminal)
    -sudo fdisk -l
    -if "no valid partition" appears, all is as it should be (if not, restart and repeat the entire process)
-shut down, turn on only if you are about to continue with the other steps immediately
    NB: otherwise leave it off, and continue whenever

2: INSTALL UBUNTU [~30min]

-boot Ubuntu live CD through the boot menu (F12 on Dells, Option/Alt on Macs)
-press "Install Ubuntu" and set the following
    -English, download updates, install 3rd party software
    -Erase Disc and Install
    -location: NYC
    -keyboard: US, US
    -name: C4L'1#-### (based on the current year and the computer's type
        NB: C4L'12-101 for Macs, C4L'12-201 for Dell D620s, C4L'12-301 for Dell D630s
    -network: c4l-1#-###

-device: c4l-1#-###
-password: ***
-wait, then confirm the restart and remove the CD

3: INSTALL UPDATES [~10min]

-remove message indicator using the terminal, CTRL+ALT+T (sudo apt-get remove indicator-messages)
-update through the update manager (it will pop-up automatically), wait, then confirm the restart

4: TUNE UP [~20min]

-add LibreOffice repository through the terminal (sudo add-apt-repository ppa:libreoffice/ppa)
-update (sudo apt-get update), then upgrade (sudo apt-get upgrade)
-run 'Language Support' and confirm the installation of the extra language pack
-add the following languages (Install Languages): Amharic (ETH), Bemba (ZAM), Oromo (ETH), Persian (AFG), Pushto/Pashto (AFG), Tigrinya (ETH)
-System Settings → Keyboard → Layout Settings → + (add) → English UK, Amharic, Pashto
        NB: there is a limitation for 4 keyboard layouts at one time
-install codecs, plugins, extras
        -sudo apt-get install ubuntu-restricted-extras
        -rightclick to get OK, enter, then leftclick to confirm YES, enter
-add some LibreOffice Extensions (minimize presentation file size, LaTex converter, import PDF)
        -sudo apt-get install llibreoffice-presentation-minimizer libreoffice-writer2latex libreoffice-pdfimport
                NB: in the future, enable global menu for Libre Office (sudo apt-get install lo-menubar)
-add calculator and cities features to the lens in the Dashboard
        -sudo add-apt-repository ppa:scopes-packagers/ppa
        -sudo apt-get update
        -sudo apt-get install unity-lens-utilities unity-scope-calculator
                NB: labs with permanent internet connection might want to add the Wikipedia lens as well:
                sudo apt-get install unity-lens-wikipedia
-disable the online search in video lense
        -cd /usr/share/unity/lenses/video
        -sudo mv video-remote.scope video-remote.scope.ignore
        -the changes will appear on the next login
                NB: to turn it on ever again just repeat the first "cd" command and type the following:
                sudo mv video-remote.scope.ignore video-remote.scope
-add ZIP, codecs, Media Repositories, and the option to play encrypted DVDs
        -sudo apt-get install unace unrar zip unzip p7zip-full p7zip-rar sharutils rar uudeview mpack lha arj cabextract file-roller
        -sudo -E wget --output-document=/etc/apt/sources.list.d/medibuntu.list http://www.medibuntu.org/sources.list.d/$(lsb_release -cs).list
        -sudo apt-get --quiet update && sudo apt-get --yes --quiet --allow-unauthenticated install

medibuntu-keyring && sudo apt-get --quiet update

-sudo apt-get install app-install-data-medibuntu apport-hooks-medibuntu

-sudo apt-get install libdvdcss2 && sudo /usr/share/doc/libdvdread4/./install-css.sh

-enable automount of USB ports (gsettings set org.gnome.desktop.media-handling automount true)

-close the terminal (e.g by clicking on its window, pressing CTRL+Q)

-install WineHQ for running any desired executable Windows files

-sudo add-apt-repository ppa:ubuntu-wine/ppa

-sudo apt-get update

-sudo apt-get install wine1.5

-shut down, turn on

-run "Configure Wine" and change the default version to Windows 7, click "Apply", then "OK"

-run "WineTricks" and click "Select the Default WinePrefix" (click on "No" for the user data collection)

NB: if you clicked "Yes" by a mistake, run the following in the terminal: winetricks --optout

-click "Browse Files" → "OK" → navigate to drive_c → Program Files → delete folder "Internet Explorer"

-close all, run terminal, add Visual C+ libraries (winetricks corefonts vcrun6 vcrun2005 → YES → YES)

-download and install desired executable software

-go to http://goo.gl/5U6xE (Sketchup 8, the Windows version)

-download it, save the file, double click and install it, then delete the installation file

-go to http://goo.gl/TlqYM (includes: Armadillo Run, GapMinder, Graphical Analysis, GraphMatica)

-download the file, extract it, delete the zipped archive (the downloaded file)

-place everything in the Common Files folder of the WineTricks Program Files folder

-create a link that you place to the Documents folder, rename the link to Windows

-select all folders in this location, rightclick, choose "Properties", change tab to "Permissions"

-change 3xFolder Access to (in this order): Create and Delete, Access Files, Access Files

-select "Apply Permissions to Enclosed Files" and make sure there is a tick

-in each folder, select all files (no folders though) and check if 3xPermissions are set to the following (in this order): Read and Write, Read and Write, Read Only

5a: INSTALL WEBCAM [~10min, MacBook Pro 1.2s only]

-install through the Software Center "tools for dealing with Apple iSight Firmware" (go forward through the extraction and ignore its abortion for now → that will be fixed through the terminal)

-put "AppleUSBVideoSupport" file on the Desktop (download from http://goo.gl/DFVBV and drag it on the Desktop from the Downloads folder)

-fix the firmware through the terminal

-cd ~/Desktop

-sudo cp AppleUSBVideoSupport /lib/firmware/

-sudo ift-extract -a /lib/firmware/AppleUSBVideoSupport

-sudo gedit /etc/default/acpi-support

-texteditor opens (this happens whenever the "gedit" command is used)

-find MODULES and make it MODULES="isight_usb" (7th continuous row of #s, the end of it)

-save it, close it

-the following will be possible to skip, if installing Ubuntu 12.04+ on MacBook Pro 1.2 (the ID number to remember would be 8300 → this command writes it out):

-lsusb | grep -Po '(?<=:)(\d+)(?=.*iSight)'

-sudo gedit /etc/udev/rules.d/isight.rules
-add the following line (and be sure to replace the "8300" with your product ID, if different than 8300 in our case): ACTION=="add", SYSFS{idVendor}=="05ac", SYSFS{idProduct}=="8300", RUN+="/usr/lib/udev/ift-load --firmware /lib/firmware/isight.fw"
-save it, close it
-shut down, turn on

5b: INSTALL SKYPE, IMPROVE THE LAUNCHER [~10min, MacBook Pro 1.2s only]

-trash the "AppleUSBVideoSupport" file from the Desktop
-system settings → mouse → touchpad → double finger scrolling (rightclick is 2 finger double tap)
-install Cheese, get and fix Skype through the terminal
-sudo apt-get install cheese
-echo foreign-architecture i386 | sudo tee /etc/dpkg/dpkg.cfg.d/multiarch
-the following will be possible to skip, if installing Ubuntu 12.04+ on MacBook Pro 1.2 (other Mac and PC models, especially those with 64-bit architecture, will likely still need these steps)
-sudo apt-get install libxss1:i386 libqtcore4:i386 libqt4-dbus:i386
-sudo apt-get install libqtgui4:i386
-sudo apt-get update
-sudo add-apt-repository "deb http://archive.canonical.com/ $(lsb_release -sc) partner"
-sudo apt-get install skype:i386 (if this line fails, get Skype through the Software Center)
-sudo gedit /usr/share/applications/skype.desktop
-line 4 should be: Exec=skype, replace it with the following:
Exec=bash -c 'LD_PRELOAD=/usr/lib/i386-linux-gnu/libv4l/v4l1compat.so /usr/bin/skype'
-save it, close it
-sudo reboot
-run'Cheese', test the webcam (either the image is shown and all is well, or not)
-run 'Skype', login (username ***, password ***), test the webcam (Skype Icon → Options → Video...)
-set "Start my video automatically when I am in a call", click "Apply", close
-quit Skype ('Skype Icon' → 'Quit')
-turn off bluetooth (System Settings → Bluetooth → Off)
-change the launcher icon size to 32 (System Settings → Appearance → bottom → shift the bar left)

5c: INSTALL WIFI, NVIDIA, IMPROVE THE LAUNCHER [~5min, Dell D620s/D630s only]

-fix the wireless and graphic card drivers through the terminal
-sudo apt-get update
-sudo apt-get install b43-fwcutter
-sudo apt-get install firmware-b43-installer
-sudo apt-get remove bcmwl-kernel-source
-sudo apt-get install nvidia-current
-make the launcher narrower by changing the launcher icon size to 32
-cd

-wget http://webupd8.googlecode.com/files/script.py
-chmod +x script.py
-sudo ./script.py 32
-sudo reboot

6: REPLACE UNNECESSARY APPS WITH EDUCATIONAL ONES [~40min]

-online through Firefox, install Chrome (download, accept, save, doubleclick, Software Center opens, install)
-close the Software Center, close Firefox
-launch Chrome, make it default, click skip for now, close one tab, keep only one tab opened
-set "Computers 4 Literacy" as the homepage
     -go to www.computers4literacy.org (make sure that this is the only tab opened)
     -Edit → Preferences (on the top tab, which is "Customization/Screw → Settings" on the right)
     -On Startup → Open a specific page → Set Page → Use Current Page → OK → close Chrome
-allow bookmark bar (Shift+Ctrl+B) and add new bookmarks (Ctrl+D): C4L.org, Google, Gmail, Google Docs, Google Maps, Wikipedia, Coursera, edX, TEDx, BBC News - World, Grooveshark, Ubuntu Guide)
-the bookmark bar and the homepage should look like the image below
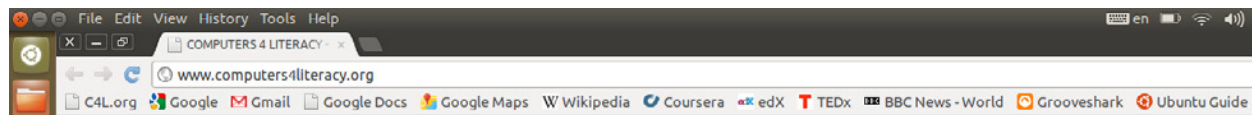
-download Google Earth installation file and install it, then trash the GoogleEarth "deb" file
-trash the Google Chrome installation file from the Downloads, and empty the trash
-install Manager for the admin account (free accounting software)
     -download Manager.exe from http://goo.gl/PwZQ2 (click "Download" → Keep)
     -Home Folder → Documents → rightclick → Create New Folder → call it "Manager"
     -move the Manager.exe file from the downloads to the Manager folder in Documents
     -sudo apt-get install mono-complete
     -wait until it goes through
        NB: don't worry about the "problems" text (it will fix itself when launched)
     -cd ~/Documents
     -mono Manager.exe
        NB: to run the Manager again in the future, navigate to Documents → Manager →
        Manager.exe → rightclick → Open With → Mono Runtime (Terminal)
          or simply type "cd ~/Home/Documents && mono Manager.exe" in the terminal
     -Chrome opens up → localhost:####/locale → English (US) → OK → Name: placeholder,
     Country: United States (both can be changed later through "Settings") → click "Create"
     -close Chrome
-through the Ubuntu Software Center remove from Installed (select "remove all" if asked)
     -Deja Dup Backup Tool (Accessories)
     -Ubuntu One (Developer Tools)
     -Shotwell Photo Manager (Graphics)
     -Ubuntu One Music Store (Sound & Video)
-through the Ubuntu Software Center remove from Installed → Internet (select "remove all" if asked)
     -Desktop Sharing
     -Empathy

-Firefox

-Gwibber

-Remmina Remote Desktop Client

-Thunderbird

-Transmission BitTorrent Client

-Ubufox Extension for Firefox

-install through the Software Center

NB: other software will be installed through packages later in this step, refer to the application list at http://goo.gl/xY34H if you are curious about the functionality of the most important applications

-Adobe Reader

-Arista Transcoder, more info → add all add-ons

-Audacity

-BrewTarget

-Childsplay

-DarkTable

-dconf Editor

-DreamChess

-GBrainy

-Gimp, more info → add all add-ons

-GnuCash Finance Management

-GoldenDict, more info → add its add-on

-HedgeWars

-K3DSurf

-KAlgebra

-Kalzium

-KDenLive

-KGeography

-KSnapshot

-KStars, more info → add HelpCenter and Tycho2 add-ons

-LibreCAD

-Miro, more info → add all add-ons

-NeverBall, more info → add NeverPutt as well

-OpenShot Video Editor, more info → add Blender as well

-PDF-Shuffler

-Periodic Table

-Pingus

-PyChess

-SagaGIS

-Scribus, more info → add all add-ons

-SMPlayer

-SuperTux2

-SuperTuxKart

-TeXworks, more info → add all add-ons

-TurtleArt

-VLC

-Wakeup

-patch the Wakeup alarm app (NB: the next release after the latest 05/2012 will not need these)

-go to http://goo.gl/ybmmN
-find and download "setnextalarm.patch" (rightclick on it, choose "Save Link As", click "Save")
-cd ~/Downloads
-sudo patch /usr/share/wakeup/setnextalarm.py setnextalarm.patch
        NB: for now, whenever setting up a new alarm, it is better to deactivate Evolution Data,
        Gmail Counter, Hebrew Calendar, Last.fm through Preferences → Plugins
-get edu packages, and make apps appear in the startup application manager
        -sudo apt-get install ubuntu-edu-tertiary && sudo apt-get install ubuntu-edu-secondary && -sudo
        apt-get install ubuntu-edu-primary && sudo apt-get install ubuntu-edu-preschool
        -cd /etc/xdg/autostart
        -sudo sed --in-place 's/NoDisplay=true/NoDisplay=false/g' *.desktop
        -sudo reboot
-dashboard → startup applications → uncheck the following
        -BackUp Monitor
        -BlueTooth Manager
        -Check for New Hardware Drivers
        -Chat
        -Gwibber
        -Personal File Sharing
        -ScreenSaver
        -Ubuntu One
        -Update Notifier
-shut down, turn on

7: STANDARDIZE APPEARANCE, ADD THE C4L-LAB USER ACCOUNT [~30min]

-manually turn off the wifi switch, if there is any
        NB: C4L'12 Dells have it on the left side, Macs do not
-make the boot splash screen resolution look sleek
        -go to http://goo.gl/RDraj (for Dell) or http://goo.gl/ZBTLn (for Mac)
        -download the background image by right-clicking and saving it on the Desktop
        -similarly, download images from http://goo.gl/RctRV, http://goo.gl/1ZojV,
        http://goo.gl/h8p9l and place them on the Desktop
        -cd ~/Desktop
        -sudo cp Seagull_by_Erik_Fendik.jpg /usr/share/backgrounds
        -sudo cp Seagull_by_Erik_Fendik.jpg /boot/grub
        -sudo cp logo.png /usr/share/unity-greeter
        -sudo cp ubuntu_logo.png /lib/plymouth
        -sudo cp ubuntu_logo.png /lib/plymouth/themes/ubuntu-logo
        -sudo cp ubuntu_logo16.png /lib/plymouth/themes/ubuntu-logo
        -sudo rm Seagull_by_Erik_Fendik.jpg logo.png ubuntu_logo.png ubuntu_logo16.png
        -gksu gedit /etc/default/grub
        -uncomment this line: #GRUB_GFXMODE=640x480 by removing '#', and change 640x480 to
        1280x800 on Dells or 1440x900 on Macs (the monitor resolution from All Settings → Displays)
        -change "GRUB_TIMEOUT=10" to "GRUB_TIMEOUT=3"

-after "GRUB_CMDLINE_LINUX=" add the following:

GRUB_BACKGROUND=/usr/share/backgrounds/Seagull_by_Erik_Fendik.jpg

-save, close, close the other untitled file without saving

-sudo update-grub (NB: it should start saying "Found background: /usr/share/backgrounds/... → if it does not, follow the other two steps, repeat all three after the next shut down and boot)

-sudo update-initramfs -u

-sudo update-grub2

-shutdown, turn on

-in the "Home Folder" delete "Examples" and other folders that are not on the left (e.g. Ubuntu One)

-remove the actual examples content

-sudo rm -rf /usr/share/example-content

-sudo rm -rf /etc/skel

-sudo mkdir /etc/skel

-install Ubuntu Tweak

-sudo add-apt-repository ppa:tualatrix/next

-sudo apt-get update

-sudo apt-get install ubuntu-tweak

-Ubuntu Tweak → Login Settings → Unlock, click on the image → select "Tie My Boat" image → Open

-turn off "Apps Available for Download" through the "dconf Editor"

-launch "dconf Editor" through the Dashboard

-Configuration Editor opens, navigate through the following

Desktop → Unity → Lenses → Applications → unclick "display-available-apps"

Desktop → Unity → Lenses → Applications → unclick "display-recent-apps"

-change the Brightness and Lock Settings

-deselect "Dim Screen to Save Power"

-change "Turn Screen Off when Inactive for" to "Never"

-turn off the Lock

NB: you might have to go to Ubuntu Tweak and unclick "Disable Lock Screen" under the Tweaks → Session Indicator

-change the power settings for both "on battery" and "when plugged in"

-System Settings → Power

-Suspend when inactive for: 1h

-When the lid is closed: Suspend

-change the desktop background to (System Settings → Appearance → 8th image, 2nd row - flower)

-remove the Recent Files history in the Dashboard (activity log)

-System Settings → Privacy → Recent Items → change "The Past Hour" to "All" → Delete History → Yes → turn off "Record Activity" → logout → log back in

-add "C4L-lab" user account (password: ***)

-System Settings → User Accounts → Unlock → + to add → C4L-lab (standard)

-Password → click on "Account Disabled" → Set Password Now → set it → click Change

-copy the Windows link to the C4L-Lab user via the terminal

-sudo cp -rT /home/c4l-12-###/Documents /home/c4l-lab/Documents

-place the Help link to the desktop, copy it to the lab and guest accounts

-Home Folder → File System → Search → yelp.desktop → rightclick on the last (2nd) result

-Copy To → Desktop

-sudo cp -rT /home/c4l-12-###/Desktop /home/c4l-lab/Desktop

-sudo cp -rT /home/c4l-12-###/Desktop /etc/guest-session/skel/Desktop

-go to http://goo.gl/D75A9 and download the 1080p .ogg version (rightclick → Save As → Videos → call it "Big Buck Bunny, HDTV 1080p (2008).ogg")
-rightclick → Properties → Permissions → make sure: Read and Write, Read and Write, Read-only
-also, "Allow executing files as a program"
-create a link (rightclick → Make Link → rightclick on the link → Rename → Big Bug Bunny, 2008.ogg)
-drag the link temporarily to the Pictures folder (make sure nothing else is in that folder)
-move the link to the video folder of the C4L-Lab user and remove it from the temporary location
      -sudo cp -rT /home/c4l-12-###/Pictures /home/c4l-lab/Videos
      -sudo rm /home/c4l-12-###/Pictures/*
-customize the appearance of the left bar (Launcher)
      -rightclick on Ubuntu Software Center 'Shopping Bag Icon' and unlock it from the Launcher
      -rightclick on Ubuntu One (icon below the previous one) and unlock it from the Launcher
      -rightclick on System Settings (icon below the previous one) and unlock it from the Launcher
      -rightclick on all other icons that appeared in the Launcher after installation, unlock them
      -keep the Home Folder and the Open Office 3 default applications ('Writer', 'Calc', 'Impress')
      -drop Google Chrome to the Launcher, under the 'Impress' icon (drag it from the Dashboard)
      -drop GoldenDict to the Launcher, under Google Chrome (drag it from the Dashboard)
      -drop GBrainy to the Launcher, under GoldenDic (drag it from the Dashboard)
-the desktop environment should look like the image below
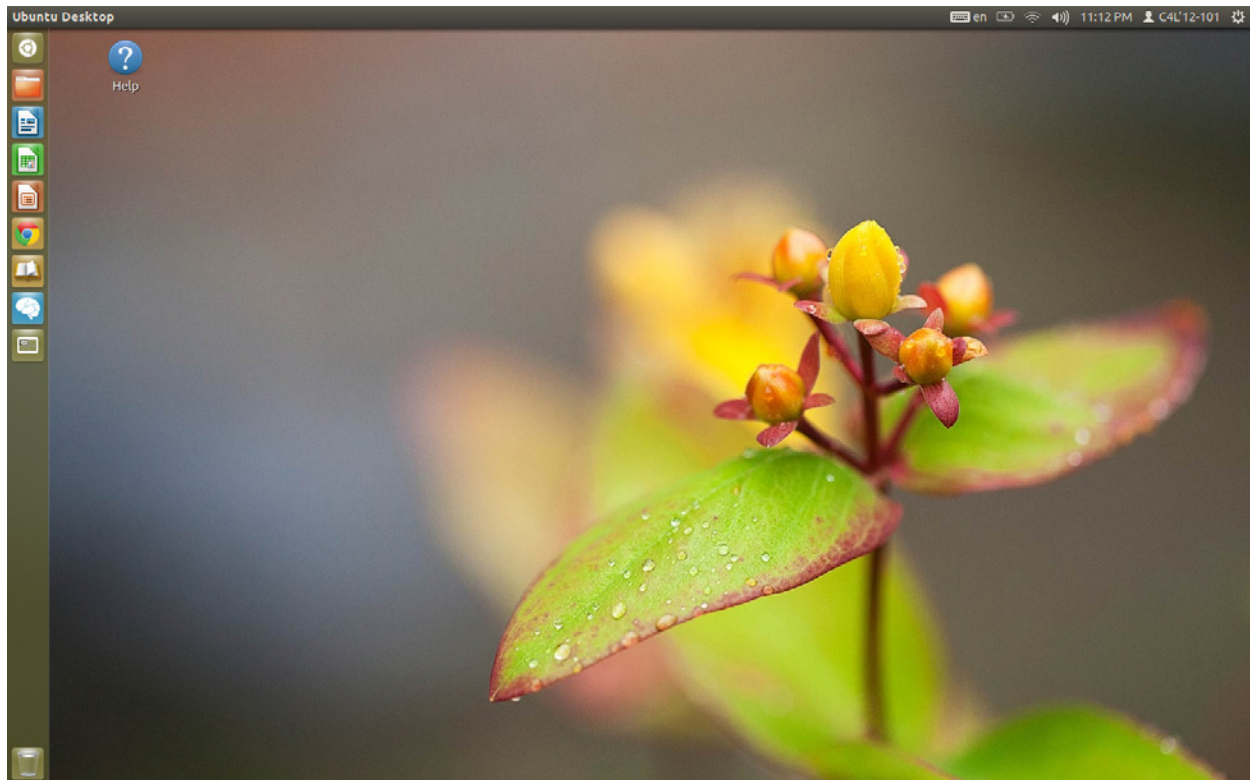
-log out, log in to "C4L-lab" and change the following on both Macs and Dells
      -other 3 keyboard layout settings (see the Step #4)
      -two finger scrolling for Macs only (see the Step #5b)
      -launcher icon size for Macs only (see the Step # 5b)
            NB: Dells are done already by the script, the Step #5c
      -turning off bluetooth for Macs only (see the Step #7)

NB: Dells will have it turning any time the physical swith turns on
-Google Chrome home page and bookmarks (see the Step #6)
-startup applications (see the Step #6)
-deleting the Examples folder (see the step #7)
-dashboard turning off of "Apps Available for Download" (see the Step #7)
-brightness and lock (see the Step #7)
-power settings (see the Step #7)
-background image (see the Step #7)
-privacy settings of the Recent Files history (see the Step #7)
-launcher bar customization (see the Step #7)
-shut down, turn on

8: INSTALL SCANNERS, ADD THE GUEST ACCOUNT [~30min]

-install libsane-extras (sudo apt-get install libsane-extras)
-edit dll.conf file
        -gksu gedit /etc/sane.d/dll.conf
        -uncomment epson and epson2, if you have epson equipment (remove "#")
        -save it, close it
-go to http://goo.gl/ZoXVf, click the link of your scanner, it redirects to http://goo.gl/v3l4W
        NB: alternatively, for epson only, you can just go to http://goo.gl/qeMII, click on the scanner icon,
        and get to the "DL1.do" page
-fill in the form, confirm
-download the "data" package (i.e. iscan-data_1.13.0-1_all.deb)
-scroll down to the file(s) under "deb 32bit package [libltdl7] (for Ubuntu 8.10 or later)"
-dowload the other one (i.e. iscan_2.28.1-3_i386.deb)
-download the one that says "plugin" (i.e. iscan-plugin-gt-x750_2.1.2-1_i386.deb)
-go to http://goo.gl/xRzsq and download the desired files (in C4L'12 case it is Epson Perfection 1670)
-install the downloaded files in the same order as downloaded
        -iscan-data... → doubleclick → Software Center → Install
        -iscan... → doubleclick → Software Center → Install
        -iscan-plugin... → doubleclick → Software Center → Install
        -libsane → doubleclick → Software Center → Install
-delete the downloaded files from the Downloads folder
-add scan button functionality
        -sudo apt-get install sane sane-utils
        -sudo apt-get install scanbuttond
        -sudo reboot
-run "Image Scan! for Linux" and "Simple Scan" applications to check the functionality
-disable and enable the guest session (to make sure that all previous changes are global)
        -sudo gedit /etc/lightdm/lightdm.conf
        -add the following line at the end: allow-guest=false
        -save it, close it
        -sudo restart lightdm
        -log back in

-sudo gedit /etc/lightdm/lightdm.conf
-remove the last line from the end (the one we had just added), save it, close it
-sudo restart lightdm
-log back in
-standardize the appearance for the guest session
    -create the directory "/etc/guest-session/skel"
        -sudo mkdir /etc/guest-session
        -sudo mkdir /etc/guest-session/skel
    -while logged on under an admin account, start a Guest Session (click on users → select Guest)
    -make any changes to the guest session that should be permanent (refer to previous steps)
        -keyboard layout (US, UK, Amharic, Pashto)
        -startup applications (uncheck: BlueTooth Man., Chat, Check for New Hardware Drivers, Personal File Sharing, ScreenSaver, UbuntuOne, Update Notifier, User Folders Update)
        -launcher appearance (just like previous 2 users, but exclude Chrome)
        -appearance (wallpaper, launcher icon size for Macs -- Dells have that script already)
        -two-finger scrolling for Macs (All Settings → Mouse and Touchpad → Touchpad)
        -bluetooth for Macs (All Settings → Bluetooth → Off)
        -dconf (desktop → unity → lenses → applications → deselect both)
        -never dim / turn screen off (All Settings → Brightness and Lock → unclick / change)
        -turn off the Lock and deselect the requirement for the password
        -disable the Lock Screen through Session Indicator in Ubuntu Tweak
        -suspend after 1h (All Settings → Power → change both values in the first line)
        -download the warning background for the Guest Session (http://goo.gl/IMJuR)
        -set it as the background
            -cd ~/Downloads
            -sudo mv warning.jpg /usr/share/backgrounds
            -System Settings → Appearance → Look → + → File System → Usr → Share → Backgrounds → warning.jpg → Open → change "Zoom" to "Fill"
    -change back to admin account and open a terminal, type: cd /tmp
    -find the temporary guest home directory (guest-*xxxxxx*)
        -Home Folder → File System → tmp
    -copy the files in the temporary guest home directory to /etc/guest-session/skel
        -sudo cp -rT /tmp/guest-*xxxxxx* /etc/guest-session/skel
    -switch back to the Guest Session, log out of the guest, login to the guest again to check
        NB: if there is a password window, press "Switch User", select the Guest Session
    -back in the admin's terminal, type: sudo reboot
    -to update the settings in the future, repeat these steps as necessary
        NB: ignore the creation of the directory as it already exists by now
-shut down, turn on

9: SYSTEM BACKUP [~30min]

-get final updates and upgrades (sudo apt-get update → sudo apt-get upgrade)
-remove unused proprietary drivers (NB: remastersys will not make a master with them -- they will have to be added manually anyways, see the Step #9)

-sudo jockey-gtk

-select a used driver, click remove

-sudo reboot

-clean the computer using Ubuntu Tweak

-ubuntu-tweak

-Janitor → select all on the left → select all on the right → Clean (bottom right)

-repeat until "Cool! Your system is clean!" appears → close

-sudo reboot

-purge cache

-sudo apt-get install bleachbit

-run through the Dashboard as both a "root" and normal (the normal is sudo bleachbit)

-the app opens, close "Preferences", manually select all of the checkboxes except

"free disk space"

"localizations"

"memory" (all 3 are present under the "system" category)

NB: clicking on the entry which has a drop-down arrow speeds the process

-Clean → Delete → wait → close

-sudo reboot

-run "Language Support" to assure the latest packs

-logout, log back in

-backup user settings using Ubuntu Tweak (Admins → Desktop Recovery → Backup all 3: Desktop, Applications, System → name all backups "C4L'12-default")

-log out, repeat the Tweak clean, purge cache (no need for "BleachBit Root though)

-backup user-settings for the lab C4L-lab account, log out, go back to the admin account

-make full system backup using "Remastersys"

-sudo su

-apt-get -y -q install ubiquity-frontend-gtk && apt-get -y -q remove ubiquity-frontend-kde && apt-get -y -q install metacity

-sudo add-apt-repository "deb http://www.geekconnection.org/remastersys/repository karmic/"

NB: yes, this is the older version of remastersys because it has fewer options, is more straightforward, and will works flawlessly on our C4L'12 computers from '06 and '07

-sudo apt-get update

-sudo apt-get install remastersys

-Dashboard → Remastersys Backup → Modify

-modify the first three lines

Username = computers4literacy

Title = Computers 4 Literacy 2012, Mac (on Macs)

Title = Computers 4 Literacy 2012, Dell (on Dells)

Filename = c4l-12-mac/dell.iso

-Backup → turn off all applications and ports (wifi/bluetooth) → wait → confirm OK → close

NB: the final .iso should not exceed 4GB if you followed the steps before precisely

-burn .iso image (Home Folder → File System → Home → Remastersys → Remastersys → .iso → rightclick → Open With Brasero Disc Burner)

NB: if burning on a USB, use "Startup Disk Creator" → select "Discarded on shutdown…"

-eject the media (Home Folder → "Eject" icon next to the media)

NB: sometimes on older Macs, the "Eject" button fails → if that is the case, close the disc burning application, log out, log back in, open terminal and type: eject -T → worst comes to

worst, you can always reboot and hold the touchepad key while it boots

-sudo apt-get install remastersys && sudo remastersys clean

-on Macs only, install the fan control driver

-sudo add-apt-repository ppa:mactel-support/ppa

-sudo apt-get update

-sudo apt-get install macfanctld

-sudo reboot

-run 'Details'

-log the machine to the inventory (http://goo.gl/aBpCT) and describe its properties:

prefix | year | number | model | hdd | processor | memory | graphics | allocation | display calibration | sound | keyboard | optical drive | other observations

NB: if you are authorised to do so, you will be granted a permission to edit the file

-shut down

10: CREATE CUSTOMIZED COPIES ON OTHER DEVICES [~20min]

-boot the newly burned DVD on another device, in order to spread your customized copy on

-select the third "Install" option from the menu using arrows and enter key

-wait, do not select the "Install 3rd party Software" or "Updates" options

-repeat the Step #2 and install a customized copy with new names (follow the sequence of ###s)

NB: on Macs (or any laptops with webcams), there will be an option to select a picture → select the dog, for example, which is the 18th one, i.e. 9th row (if the "continue" button does not work,   shut down and load the installation medium once again)

-ignore any requests to connect to the internet, go through the options

-wait, then confirm the restart and remove the CD

-log in to the administrator account

NB: if any pop-up windows appear, cancel them ('system problem detected' or '...application closed unexpectedly'), use "Bleachbit" as both a root and a normal user (see the Step 9)

-trash the installation file shown on the desktop ("ubiquity-gtkui.desktop") and empty the trash

-System Settings → User Accounts → click on the administrator's name and update the ### → click anywhere on the desktop, observe the updated name on Macs

NB: on Dell Latitude D620s you may have to log out to see the new welcome screen

-if in a setting with internet connection, plug in the ethernet cable

-the system time updates automatically

-install any necessary propretiary drivers

-on Dell Latitude D620s run 'Additional Drivers', activate 'nvidia-current' (run 'Additional Drivers' → find 'nvidia-current' → activate → restart)

-on Macs, install the fan control driver

-sudo add-apt-repository ppa:mactel-support/ppa

-sudo apt-get update

-sudo apt-get install macfanctld

-sudo poweroff

-turn on, log in to the administrator account again, run 'Details'

-log the machine to the inventory (see the Step #9)

-shut down, celebrate