

Linux Life in a Windows World

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Question

I just bought a shiny new Dell laptop running Microsoft Windows XP. This class seems to be entirely based on Unix/Linux topics; will I be able to use my new computer to work on the software from this class?

Recommended solution

Get Microsoft Windows versions of the following software:

- emacs or xemacs
- WinEdit (shareware)
- R
- a secure shell client
- MinGW
- Active State Perl
- the R utilities off of Brian Ripley's web page
- MikTeX (comes with a dvi viewer called Yap)
- Ghostscript and GSview (shareware, \approx \$50 to eliminate the registration message)
- an X server (the dept uses Xceed \approx \$50)

The links on the class web page will help you get this software.

VMware

Virtual machine software

- Complete versions of two (or more) operating systems on a Windows (or Linux) host
- Fast: guest operating system nearly operates at native processor/video speed
- Expensive (> \$100)
- Tricky guest operating system install
- You have to administrate (at least) two operating systems
- Not a good solution if you don't like to tinker
- Requires a lot of RAM

Cygwin

- “There’s a C library which provides a Unix-style API. The applications are linked with it and voila - they run on Windows.”
- Comes with: bash, gcc, perl, L^AT_EX, an X server, ssh, scp, emacs, make, ...
- Seamlessly integrates windows with Unix-esque commands
- A little tricky to install
- File sharing is a lot easier than ordinary VMware installations
- Many unix programs cannot be built from source as is with Cygwin (though many can)
- You can’t really use Cygwin to build R packages (you’re better off just using a dos prompt)

Installing Cygwin

- To install Cygwin
 1. Run `setup.exe` from their website
 2. Choose to download packages to local repository (get everything, 1 gig)
 3. Re-run `setup.exe`
 4. Choose to install packages from a local repository
- Cygwin now automatically starts you in their X-windows environment

Services for Unix

- Free (as in cost) Cygwin style software produced by Microsoft
- A user base has modified a lot of standard Unix utilities to compile under SFU; such as emacs, bash,...
- Does not come with an X server. Web site says you can use commercial clients like Xceed
- Is rumored to be “an integral part of Longhorn”
- Installation is easy
- I haven't really used this enough to compare critically with Cygwin

Linux Live CDs

- Many groups have created versions of Linux that you can run by booting directly off of a CD
- Eg: Knoppix, Mandrake Move, Damn Small Linux ...
- It's as easy as: download the live CD image, burn it to a CD, update your BIOS so that it boots from the CD first (most computers do this already)
- Every time you boot your machine with the CD in, it will boot to Linux rather than windows
- Reboot the machine without the CD in and everything is back to normal
- Most likely Linux will only have read access to your Windows files¹
- Use a usb drive to store files permanently

¹Unless you installed Windows yourself and partitioned your drive with different file systems. In which case you know better than me what you are doing.

This Class

- If you prefer to work in a Windows environment, use the Windows versions of emacs, L^AT_EX, R,...
- ssh to the departmental servers to do the assignments that require Unix/Linux
- A Linux Live CD is the most harmless way to try Linux on your own machine
- Try installing SFU or Cygwin if you want to tinker; there is no departmental support for these solutions
- Install VMware only if you really like to tinker; there is absolutely no departmental support for this solution