

Migrating from Windows to Linux

Why it's really become painless these days

Prepared by Colin Charles
byte@aeon.com.my
<http://www.bytebot.net/>

Overview

- If you fail to plan, you really do plan to fail
- Desktop migration
 - Also multi-user desktops
- Server migration
- Applications that are now “open source” based
- Still using your Windows-based applications

Why migrate to Linux?

- Huge community of developers
- High performance OS
- Open standards
- Tonnes of utilities and applications available!
- It's FREE
- Runs on not-only x86 or PowerPC hardware – has so many other supported platforms

Planning for a home-user desktop migration

- Questions to ask:
 - What do you do with your computer on a daily basis?
 - What applications do you run?
 - Is your hardware compatible with Linux?
 - Video card, sound card, additional peripherals like digital cameras, USB devices, network card, printer and more
 - Have others had success installing it on the same laptop?
- GNU/Linux Preinstallation Checklist
 - <http://www.faqs.org/docs/Linux-mini/Pre-Installation-Checklist.html>

Some answers...

- If all you do is word-processing, some usage of office based applications, and surf the Internet, you're an average home user – migration is easy!
- If you play many games...
- If you use specialized applications, an alternative may need to be found

A little case study

- Use office software – Microsoft Office
 - Quicken for cash management
 - Photoshop for image editing
- Internet-based software
 - Internet Explorer, Pegasus Mail, ICQ, MSN Messenger, Yahoo! Instant Messenger, mIRC, SecureCRT, Agent
- Coding
 - MS Visual Studio, ActiveState Perl & Python
- Palm Pilot syncing
- Never played games...

I found alternatives...

- Office software – OpenOffice.org
 - Quicken got replaced by GNUCash
 - The GIMP replaced Photoshop
- Internet-based software
 - Mozilla/Firebird, Ximian Evolution, LICQ, EveryBuddy, X-Chat/BitchX, plain Jane ssh with Keychain, slrn
- Coding
 - Gcc/gdb, perl, python, DDD, and many more!
- JPilot/Kpilot, Evolution

A Desktop Publishing Firm

- From an entire Windows environment, with a MacOS based laptop, they're fully open-source now
- Server runs Debian GNU/Linux, desktops run RedHat Linux 8.0, with Mozilla, OpenOffice.org and Scribus
- The Mac really got replaced by Scribus and OpenOffice.org

A suggestion on planning

- 1) Find your alternative software packages first
- 2) If they have Windows equivalents, try them first
- 3) Make sure your hardware is compatible
- 4) Decide on starting with a dual-boot system
- 5) Once you boot into Windows a whole lot less, you know you're ready to fully migrate!
- 6) Choose a distro

Finding alternative software

- A good list exists of the common equivalents:
 - <http://linuxshop.ru/linuxbegin/win-lin-soft-en/>
- Freshmeat.net is really a good friend to have around
- Google, as well as Google Groups are helpful too

Windows-based Open Source Software

- Many of these such things are available
- For servers, MS even has “Services for Unix”!
- Think Mozilla for web-browsing/e-mail/news
- Think OpenOffice.org for Office software
- Think Cygwin for a “Linux” on your Windows desktop
- Knoppix – Linux on a CDROM

Ready to migrate?

- If you were comfortable with the earlier software, and worked out their nuances, you are ready
- BACKUP!!! Then defrag.
- Going the dual-boot way?
 - GRUB, with chain-loading tends to handle Windows 2000/XP partitions better than LILO
- Resizing the disk – ntfssize, parted/QTParted
- Later making active partitions – fdisk/cfdisk/Disk Druid

Choosing a Distro

- <http://www.distrowatch.com/> will come in handy
- Mandrake Linux is very user-friendly, and comes with just about everything setup out of the box
- Red Hat Linux is just as friendly, a little more “commercial” than Mandrake, but this has changed
- Debian – hardly in tune with a GUI for setup, use only if you feel really brave

Understanding User Accounts

- Windows 2000 and Mac OS X started with the correct idea of user accounting
- Basically two important groups:
 - Root users
 - Normal users
- Has its advantages – on a single shared machine; malicious application execution isn't harmful to the system

Installing Linux

- The fun part!
- Lots of varying reports, on varying hardware, with varying distros.
- Hopefully the bootloader gets installed correctly, then all is well (with Windows and Linux)
- Hardware detection is a bit flaky – Mandrake does it well, Red Hat has kudzu, and Debian takes some form of tweaking – hardware discovery helps

Choosing a Window Manager

- Many choices (as usual)
 - GNOME (my preference)
 - KDE (mature, has lots of additional utilities, sort of sponsored by the German government too)
 - Xfce
 - WindowMaker, AfterStep, fvwm, Blackbox, Enlightenment and heaps more
- Login display managers – gdm, kdm, xdm

Installing Software – Debian

- Uses the famed APT-GET system, with dselect and tasksel
 - apt-setup – configure your sources.list
 - apt-get update – update changes
 - apt-get dist-upgrade – system wide upgrades
 - apt-cache search <package_name> - find a package
 - apt-get install <package_name> - install stuff
 - dpkg -i
- Aptitude (text-based); synaptic, kpackage, gnome-apt, etc... (GUI based); apt-cdrom

Installing Software – Mandrake

- urpmi <package_name> - installs a package
- urpmq <name> - searches for a package
- urpmf <filename> - searches through files
- urpmi.addmedia – add RPM and urpmi databases
- urpmi.update -a – upgrades database of packages
- DrakConf has a front-end configuration tool which makes life so much simpler!
- Mandrake Control Centre

Installing Software – RedHat

- rpm -ivh <package.rpm> - installs, verbosely
- rpm -e
- Doesn't do package dependencies :(
 - rpmdb-redhat; --aid option
- up2date
- APT-RPM – started by Connectiva
 - <http://bazar.conectiva.com.br/~godoy/apt-howto/>
- RedCarpet, yum

Install Software – tarballs

- Sometimes, you don't get RPM's or DEB's of your stuff
- Usually:
 - tar -zxvzf filename.tar.gz
 - cd filename
 - ./configure
 - make
 - sudo make install
- Use bunzip2 on .bz2, or uncompress on .Z

Backing up (and mounting)

- Floppies – mount them first, copy data over, then unmount them
- CDR/CDRW's – becoming the common way to backup data
 - XCDRoast, k3b, Nautilus drag&drop support
 - Needs ide-scsi emulation
 - Upgrade to kernel release 2.6, and ATAPI IDE stuff works
- Rsync, Unison

Getting some tunes going...

- Gnome CD Player, KsCD
- XMMS, Rhythmbox, GStreamer
- Audacity – Sound Forge/Cool Edit replacement
- Grip, cdparanoia (text-mode)
- MP3's don't work out of the box on Red Hat Linux
 - <http://havardk.xmms.org/dist/xmms-1.2.7-rh8-rh9-rpm/>

What about video?

- Xine, Ogle – DVD players
- VLC – VideoLan Client; great for VCD's
- mplayer - MPEG/DivX/etc...
 - Works better with GUI stuff built in
 - Xvidcore, divx4linux
- Film Gimp

Graphics...

- The GIMP – Photoshop replacement/killer!
- GQView – slide shows, general viewer
- Dia – draw diagrams, including UML
- OpenOffice.org Draw – vector graphics galore!

Office Software

- Most people use their PC's for this sort of reason!
- Koffice, Gnome Office
- Prefers OpenOffice.org
 - "95% Microsoft Office, at 1% the cost"
 - Writer, Calc, Impress, Draw, Math, HTML, Formula Editor, and more!
- Mr. Project – project management
- GNUCash – accounting software

Internet Based Software

- Netscape Navigator, Mozilla, Firebird, Konqueror, Galeon
- Ximian Evolution – the Outlook replacement
- Usual console utilities:
 - Ping, traceroute, netstat, etc...
- mutt/pine/elm – text based e-mail
- Exim, fetchmail, procmail
- wvdial/KPPP

Linux Gaming

- TuxRacer
- FreeCell, Backgammon, Gnibbles
- Don't know much about this, but:
 - <http://www.linuxgamers.net/>
 - <http://www.linuxgames.com/>
 - <http://lgames.sourceforge.net/>
 - Loki had good games (?) but have since closed down
- UT2003 and America's Army are natively released on Linux

Other interesting stuff

- Scribus – great for DTP use
- XPDF
 - Some hands on tips - <http://linuxrefresher.com/intro/migrate.htm>
 - <http://www.linuxvirgins.com/> - A gentle guide for first time users
- gkrellm; use cron to start xmms; etc...

Running Windows software

- WINE
 - <http://www.winehq.org/>
 - <http://www.bytebot.net/geekdocs/pmail-wine.html>
- Refer to the WINE database of apps that actually work on Linux – the list is **very** large
- Running emulators like Bochs works too
- TrueType fonts can be used on Linux, natively
 - BitStream Vera TTF's are not free

Maintenance

- Install sudo
- Distro-specific help:
 - apt-get dist-upgrade regularly
 - up2date works; payed up is quicker
- `/etc/inetd.conf` or `/etc/xinetd/*` control services that that the machine allows
- `netstat -l` – look at ports that are being listened to
- Keep up to date with patches/new kernels

Webmin

- <http://www.webmin.com/>
- Takes the intimidation out of doing things
- Work-able via your web-browser
- Not highly secure (IMHO), but usable if you've got machines at home
- Burn a CD, manage SAMBA, just about do anything!
 - <http://webmin.thirdpartymodules.com/>

More config tools

- Redhat-config-*
- DrakConf
- KUser/redhat-config-users
- KCron
- alien
- updatedb&
- Compile a kernel

Knoppix

- Bootable CD, with a full KDE-based Debian GNU/Linux Distro, plus excellent hardware detection
- Can be installed on-to a hard disk
 - knx-hdinstall
 - And follow the on-screen instructions
- Fully apt-compliant with Debian testing/unstable
- <http://www.bytebot.net/geekdocs/debian-knoppix.html>
- Careful with partitioning and chain-loading though

Getting a server installed

- Debian is probably a good bet, but so is Red Hat
- Web server – Apache – replaces IIS, and more (with WebDAV and others...)
- Mail server – Exim/qmail/postfix – replaces Exchange
- Database server – MySQL, postgresql
- Remote access services – OpenSSH sshd
- And many more... including Jabber servers, irc servers

Samba

- A Linux file server, with Windows clients
- Good for workgroups, homes, etc...
- Needs to be tweaked & configured
- Doesn't work to full optimizations out of the box
- samba-swat is worth investigating
- Seamless integration
- Samba 3.0 is “out”

Things that don't work too well..

- Kazaa
- The latest whiz-bang MSN Messenger that MS keeps on changing
- Occasional document conversions to/from MS Office formats seem to break
- Oracle's database – only Red Hat works reasonably well; system requirements are high
- OCR software is still quite young
- Parallel port scanner support is still flaky

Q&A

- Any questions?
- I'll try to give answers :)

Thank You



Colin Charles
byte@aeon.com.my
<http://www.bytebot.net/>