



Integrating Linux Desktops into a Corporate Infrastructure – A Case Study



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Introduction

- What is this session about?
 - Case study of one person's odyssey living on Linux in a corporate environment without support from corporate IT
 - NOT about strategies for large scale Linux deployment in corporate environments
- Related documents on Conference Web Site (and CD?):
 - 4013.html: a paper documenting much of this talk along with lots of useful URLs
 - 4013.pdf: presentation slides in PDF format
- Linux is being used for this presentation
- Ask questions anytime!

Case Study Background

- Why Linux?
- Period of Case Study:
 - research 2000-2001, deployment Feb 2001- present
- Work environment
 - Office LAN: docking station, wireless
 - Home-office LAN: wireless, broadband
 - Customer locations
- Applications
 - Exchange mail
 - MS Office documents, Web browsing
 - Occasional Windows-only application
 - Remote access: dialup, VPN
 - PDA integration

Hardware Configuration

- Compaq Armada M700 laptop
- Pentium III 700 MHz
- 192 MB RAM
- 12 GB disk (2)
- Intel EtherExpress 10/100 NIC
- Lucent WinModem
- Compaq WL110 wireless PCMCIA card

Linux Distribution Selection

- Distributions considered in 2001:
 - Red Hat
 - Mandrake
- Distributions I would consider today:
 - Mandrake
 - SuSE
 - Others:
 - Debian based: Linspire, Xandros
 - Fedora Core

Disk Layout

Partition	Size (MB)	Purpose
hda1	100	/boot multi-boot support
hda5	240	swap
hda6	5000	/home (shared)
hda7	3200	/ root partition (production)
hda8	3200	/ root partition (test)

- Two versions of Mandrake Linux on drive
- Grub boot loader

Corporate Mail

- IMAP access of Exchange 2000 server
- IMAP clients:
 - Mozilla mail (Thunderbird)
 - Evolution
 - Kmail
- Disconnected (offline) mode mail processing
- Directory Service: LDAP
- Shared Calendar service: none, plan to try:
 - Evolution Connector
 - Korganizer in KDE 3.1
- Outlook Web Access

Office applications

- OpenOffice 1.x.x
 - Good (but not perfect) MS Office document exchange
- Windows virtual machine
 - Vmware
 - Win4Lin
- Wine (Crossover)
- Others:
 - Abiword, gnumeric
 - Koffice
 - Softmaker: Planmaker, Textmaker

Win4Lin for Windows applications

- Runs Windows 9x as process(es) under Linux
- Requires a Windows license, and windows install
- Cost \$60 from Netraverse
- Uses Linux I/O stack, network stack
 - Improved speed and stability
- Linux file system used for Windows
 - Quick reboots, fast recovery from “blue screens”
- Excellent application performance, emulation quality
- Requires a kernel patch
- Does not handle DirectX

Internet

- Web Browsers
 - Mozilla (Firefox), Opera, Konqueror
 - Plugins (native and Crossover)
 - IE under Win4Lin (or Crossover)
- Instant Messaging
 - AIM, Yahoo
 - Multiprotocol: Gaim, kopete
- VPN: Linux PPTP client
 - Requires MPPE kernel module
 - Smart routing (split-tunnel)
- Dialup: Lucent Winmodem driver for Linux, PPP
- Wireless: WEP encryption

Legacy Applications

- VAXnotes
 - Discussion forum, knowledge base
 - Terminal based client available for VMS, Tru64
 - Currently access via Telnet to a Tru64 system
 - Plan to try Windows client via Wine
- VNC
 - Remote access for terminal, X-based and Windows apps

PDA integration

- iPAQ
 - Synchronizing issues with Linux desktop
 - SynCE Project (synce.sourceforge.net)
 - Linux on iPAQ
- Palm
 - Jpilot
 - KDE PIM tools: Korganizer, Kaddressbook
 - Evolution

Sharing files with Windows

- Relevant in a Linux/Windows dual-boot environment
- Easiest solution: use a FAT file-system
 - Disk partition or a USB key drive
- Accessing NTFS from Linux:
 - mount -t ntfs (read-only)
 - captive-ntfs
- Accessing Linux ext2/3 from Windows:
 - explore2fs (read-only)
- Commercial products: Paragon NTFS, Mount Everything

Conclusions

- Challenges encountered
 - Significant initial time investment
 - Researching solutions, experimenting
 - Configuring, integrating
 - Rapid evolution of the Linux desktop
 - Ongoing upgrades
 - Wait for distribution upgrade
 - Upgrade selective applications (e.g. Mozilla)
 - Good documentation essential
 - Patch management

Conclusions

- Goals accomplished
 - Linux functionally adequate for 95-98% of business requirements; reasonable workarounds exist for others
 - Functioned with Linux on laptop for > 3 years
 - Developed Linux expertise in the process, valuable to my corporation and customers
 - Increased productivity:
 - Improved platform stability, speed
 - Less platform maintenance
 - Continued usage of familiar Unix tools
 - Learned a lot! Had a lot of fun! Made lots of new friends! Became a part of the community!

References

- See accompanying document titled *Linux for Mobile Professionals*
 - documents this case-study
 - provides a large number of URLs for the components discussed

