Merlin, Kennards Hires' FOSS Sorcery

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Quick overview

- Kennards Hire
- Project Merlin
- Linux on the corporate desktop
  - Xfce, Gnome, OpenOffice.org, Jabber
- Linux on the backend
  - LDAP authentication, Samba, BIND/DHCP
- Deployment, Maintenance, Management
  - Kickstart, Yum, Rsync
Focus & Outline

- Implementation
  - foundations, customisation
- Deployment
  - prepping, going live
- Maintenance
  - systems management, modification cycle, updates
Who am I?

- Lindsay Holmwood
  - Project Merlin
    - architect, engineer, implementor
  - HSC student
  - SLUG committee member
Kennards Hire

- Internationally recognised equipment hire company
- Over 50 years of business
- 84 branches Australia-wide, expanding
- 500+ employees
Project Merlin

- Front Counter SOE
  - new POS system (proprietary)
  - customised operating system & software environment
  - standardised hardware
- Infrastructure entirely FOSS based
  - frontend
    - employee desktop
  - backend
    - authentication, file sharing, IM, systems management
Why Linux?

- Kennards IT vision
  - cost reductions, standards, stability, quality
- Current POS infrastructure
  - heterogenous, aging, unreliable, unfeatureful, propriety
- FOSS == choice
  - interchangeable, extendable, customisable, managable
FOSS infrastructure

headoffice.kennards.com.au
uber

branch1.kennards.com.au

branch2.kennards.com.au
branch server

front counter systems

autonomy! autonomy! autonomy!
Foundations

- IBM Hardware
  - x365, x306, SurePOS 300, ThinkCentres
- Fedora Core 3, base install
  - desktops, branch servers
- RHEL4, standard install
  - uber server
Customisations

- Package groups
  - define machine role
  - Kennards SFF, Kennards POS, Kennards Server
Desktop & Applications

- Xfce, Gnome
  - lockdown (employees), standardised
- Mozilla Firefox
  - standard install
- OpenOffice.org
  - wrapper scripts
- Gossip
  - employee IM
Branch backend

- Services
  - OpenLDAP
    - authentication, hub service
  - Samba
    - shared home directories
  - Apache
    - branch software repository
  - BIND/DHCP/tftpd
    - netbooting
  - CUPS
Backend details

- **authentication**
  - OpenLDAP
    - directory administration, replication, initial synchronisation
    - pam_ldap, lookups, lookup order

- **file sharing**
  - Samba
    - LDAP hook in
    - pam_mount
Configuration Packages

- High level configuration
  - startup, authentication, package repositories, services, printing
  - logon, desktop environment, applications
  - kennards-[pos/sff/server/support/netboot/yum]-config

- Modifies standard minimal FC3 install
  - minor/major modifications
Management

- Packages
  - hard local definition vs remote managed state
  - Yum
    - repositories, packages, groups
    - tiered structure, autonomy
Maintenance

- Access
  - openssh, vnc

- Updates & Modifications
  - modification cycle
    - diagnose, patch, package, test
  - package repositories
  - manual labour
    - synchronisation, updating
Deployment

- Manual or automated
  - netbooting
  - kickstart
    - standard install
    - post install
- Prep and ship, gradually & enmass
- Branch autonomy
Merlin timeline

- Development
- Two stage deployment
  - initial Designex rollout
    - interface with Windows 2000 Terminal Servers
    - phased
  - Merlin application goes live
    - new POS, entirely FOSS
Issues

- Systems management
  - heat, updates
- Users
  - acceptance, curiosity killed the cat
- Windows integration
  - Terminal Services
Questions?

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http://asymmetrics.net/