Digital Map Making:
A Linux Desktop Migration
(beyond GNOME & KDE)

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Agenda

- Background Information
- Design Choices
- The New Desktop
- Samba Trouble & Solution
The Customer Case

Landesvermessung und Geobasisinformation Brandenburg

- State office for geo-information and survey
- Collecting, storing and developing data relating to location on the surface of the earth.
- Responsible for the production and publication of the official maps and for keeping the official land register of the Federal State of Brandenburg.
- Located in Potsdam
- Heavily IT dependant
Digital Map Making

- Department size ~ 30 map makers
- Computer based (specialized CAD application)
- SICAD
- 2 IRIX application servers, 2 Linux database servers
- Users running Windows & Exceed as desktops
- Slow (load times up to 5 min !)
- Batch processing on central servers
- SPOFs
- Who knows how to admin IRIX ?
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System Layout

- Migrate SICAD to Linux
- User desktop runs Linux
- Use existing user accounts from existing AD
- No need for application server
- Linux database servers
- Central file storage (NFS) for work area
- Central file storage (NFS) for home directories
  - No personal data on user desktop
  - Users can work on any computer
- Test & Development on VMware ESX
Requirements of a Linux Desktop

- Integration into existing AD environment
- No extra management hassle for IT staff
- As simple as possible – don't confuse the user
- Easy to customize menu system
- „Fool proof“, no user help desk for Linux desktop
- Commercial support and security updates (Novell Linux)
SLED 10 & fvwm

- SuSE Linux Enterprise Desktop 10
- AutoYaST scripted installation (in 25 minutes ready)
- All required software included (OpenOffice ...)
- fvwm:
  - fixed system-wide configuration
  - simple menu system
  - fast
  - does not look like Windows
  - „Consultants Preference“
- Windows apps through Citrix, fvwm menu integration
Why not GNOME & KDE?

- KDE & GNOME very well integrated in SLED 10
- Looks like Windows – confusing for Windows users
- Users can change too many things, break GUI
- Users can try too many things – no Linux hotline
- Slow & Sluggish
- Difficult to enforce central (NFS based) configuration and menu system
The Project

- Total of 25 consulting days
- Development & Pilot in 17 days
- Rollout in May / June
- End-user training:
  ½ day workshop & 2 hours personal migration / coaching

- Trouble to find hardware
  (Novell YES certified and really working well)
- Overhaul of internal processes – each day a new detail
- Major effort with documentation (DokuWiki)
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Login

Welcome at pdtk01

Login: [ ]
Password: [ ]
Citrix PNA login
fvwm menu
Users need a way to shutdown their computer!

But they can also ask for help ...

Wrote this in 1 hour using FvwmScript
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Windows 2003 R2 Domain

- Includes ½ SFU
- Ancient technology (NIS)
- Management of UNIX groups independant of Windows groups

Linux connectivity:
- nss_ldap
- nss_pam
- Works without problem
- Inconvenient
Samba 3.0.24

- First SuSE build broken (!), second (-54) OK
- Winbind in AD / RFC2307 mode:
  - passdb backend = tdbsam
  - idmap backend = ad
  - idmap uid = 100-20000000
  - idmap gid = 100-20000000
  - winbind nss info = rfc2307
- Works very well & convenient
- No more double group management
- Clients use LDAP (pam / nss), no domain join required
More Features

- Winbind on clients (domain joins ?)
- Kerberized SSH between clients and to servers
- Service management
- Login scripts
- Hopefully, seamless Citrix login
- Let people use more Linux applications
Thank You! Questions & Answers
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