

The Slacker's Guide To Custom Linux Distributions

or, Doing with three people what Ubuntu did with thirty

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Debian Miniconf 2006

Computer Angels

“promotes and encourages computer literacy throughout the community”

- volunteer, non-profit organisation which started with a post to the PLUG list
- provide training sessions to those who would not otherwise have exposure to computers and the Internet
- participants receive a refurbished computer when they complete training

Refurbished Computers

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The hardware we receive is typically cast-off corporate machines:

- Pentium II or III, 300–600MHz
- 128MB RAM
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So what software do we run?

- Not Windows
- Not GNOME

We Run Debian

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The situation, from late July 2002 til early 2005:

- Take Debian Woody and fvwm95
- Add backports and mangle until almost usable
- Use partimage over the network to install copies on loads of machines

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- Firefox and Thunderbird too
- But not Open Office: we teach using Abiword and Gnumeric instead

Alternatives To The Partimage Approach

All the ones we could find “out there” were unsuitable.

- We'd like to have some idea of what ends up in our image
- Our machines are slow enough that we don't want to go through a complete installation every time

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- We know exactly what ends up going in our image
- We know exactly what we changed between each iteration
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- A complete build runs in about 20 minutes on modern desktop hardware
- Sometimes Debian breaks things for us, though ;-)

The Grooviness Of Debian

Probably old hat to most people here:

- `debootstrap`
- `dpkg --get-selections`
- Debconf seeding and the non-interactive frontend

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- Files in `/etc/skel` and `adduser.local`
- Customised Debian packages
- Post-install scripts

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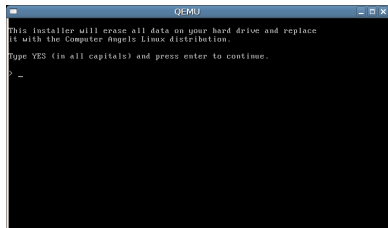
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- Security updates
- Tracking unreleased Debian versions
- Still inconvenient for other people to use what we've done

Installation Issues

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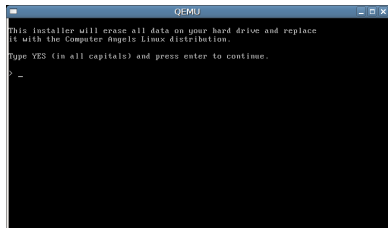
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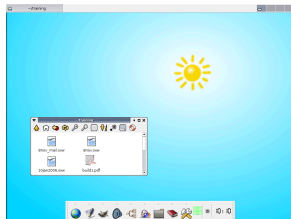
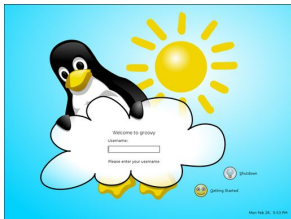
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Hacking debian-installer wasn't as easy as we'd hoped.

Being More Welcoming

- We patched gdm to provide a “Help” button
- Every machine has a guest account
- Our login screen and desktop background look friendly



Protecting Participants From Themselves

- Run XFCE in “kiosk” mode
- Simple, non-scary config tool for network configuration written in PyGTK
- Supermount for CDs and floppies
- Hotplug/udev script to automatically mount USB media
- Pick an application for a task and make it work well

Making Stuff Work

Mailcap!

- Debian's `/etc/mailcap` system works pretty well
- Firefox and Thunderbird *mostly* do the right thing with it
- ROX Filer needed some coaxing
- We tweak the `/etc/mailcap` file a bit so that some MIME types have more sensible associations

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Not much.

- It's not that hard to to make a custom Debian distribution — but it will consume your life!
- These kinds of tricks seem useful for lots of other purposes
- Surprised that no-one else had done something similar

Questions?