auto-building live-CDs with debian-live

Presentation at the debian miniconf at LCA 2007 in Sydney

Holger Levsen Jan 15th 2007
Outline

• a bit about me
• school specific needs
• a bit of history & statistics
• status of world-domination
• architecture & features
• development model & tools
• contributions to Debian
• challenges
Some bits about me

• running Debian stable as primary OS since 1996
• founded the Debconf video-team in 2005
• in NM queue since 2005
• FAI (fully automatic installation)
• Debian-QA / piuparts
• Debian-edu member, powerpc porter, ftpmaster
• don't know much about the interior of live-package
About

• guidelines for the package:
  – only unchanged, official packages
  – no configuration of the live system
  – no live system to harddisk installer
• available in etch, sid and sarge backports
• http://live.debian.net (alioth)
• http://wiki.debian.org/DebianLive
• #live-package on irc.debian.org
Features

- CD/DVD creation (with usplash! :)
- netboot and usb-stick support
- multi arch (i386 and amd64, partly on the rest)
- preseeding and hooks
- templates
- default tasks: standard, minimal, x11, x11-core, xfce, kde, kde-core, kde-full, gnome, gnome*
- custom (signed) apt-repositories possible
- unofficial: hd-installer and boot from hd
How (I think) it works :)  

- creates chroot with cdebootstrap
- apt-get install kernel-image with squashfs & unionfs
- casper (from ubuntu, but modified in Debian) for generating the initramfs images
- install preseeded flavour packages
- run custom hooks (if any)
- compress rootfs as squashfs image
- assemble final iso / netboot image
Why auto-building

- to test development
- breakage easily detectable
- wider testing
- manual live-CD are a pain to maintain
- provide live-CDs for end-users (once they are stable)
autobuild setup

• dedicated, restricted vserver running etch
• live-package, casper & cdebootstrap from sid
• daily cronjob updates svn working copies and runs make-live
• trusted users (me plus one each) can trigger manual build
• sends build-logs via mail
• provides build-logs and generated .isos via http
autobuilding faicd

- faicd installs Debian with FAI (fully automatic installation)
- minimum install plus fai-package and config
- boots, runs FAIs, ends -> new system is installed
- currently a proof-of-concept
- to show that fai-kernels is not needed anymore
- http://faicd.debian.net
- svn://svn.debian.org/fai/people/h01ger/faicd
- works, but needs polishing
autobuilding for debian-edu

- live-CDs for debian-edu
- three different CDs:
  - standalone workstation
  - workstation & server, including LTSP server
  - firewall
- http://edulive.debian.net
- svn://svn.debian.org/debian-edu/src/build/live-CD
- currently only builds a non-customized workstation, no special users or edu-specific theming
Thanks

- Questions ?