News from the Debian Installer: Stretch & Buster

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D-I release manager

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DebConf17, Montreal
Stretch
Releases during the Stretch cycle

Jessie:

- 1 Alpha, 2 Betas, 3 RCs
- already better than Wheezy but *room for earlier/more releases*
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Stretch:
- 8 Alphas between July 2015 and November 2016
- 5 RCs between January 2017 and June 2017
Full CD sets are gone
Installation images

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Reason:
- up to 80 CDs (amd64)
- last built in 2015: 854 images
- total: 555 GB
- for each release!
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CD options now:
- netinst (not netboot!)
- plus a single extra CD: Xfce
Architecture-related changes

Official/release archs:
  ▶ addition: mips64el
  ▶ removal: powerpc
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Ports:
  ▶ easier building against debian-ports.org
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Multi-arch (amd64+i386)
- default to amd64 now!
- syslinux trick: ifcpu64.c32
- thanks to: Didier Raboud
Another default change

Randall Monroe’s https://xkcd.com/910/ → #debian-boot topic
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Big changes

Graphical installer now the default, after many years
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Can show more languages, but the logic is the same. Examples follow:

- Hebrew (RTL)
- Persian (better rendering)
- Punjabi
- Sinhala
- etc.
גרף אינסטלקטור: עברית (טקסט)
Graphical installer: Hebrew (graphical)
Graphical installer: Persian (graphical)
Graphical installer: Sinhala
Graphical installer: conclusion

GTK rendering: DirectFB then X.Org
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Mail to debian-boot@:

   Subject: Switching g-i from DirectFB to X11
   Date: Mon, 8 Feb 2010 17:33:55 +0100

Details → https://mraw.org/blog/2010/02/
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- why I’ve maintained the X11 stack for several years
- why I’ve looked into d-i release management
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Thanks to: Josselin Mouette, Julien Cristau
Big change in CJK world:

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Fonts

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Drawbacks:

- still not bullet proof
## Fun with fonts (1/3)

### Select a language

Choose the language to be used for the installation process. The selected language will also be the default language for the installed system.

<table>
<thead>
<tr>
<th>Language</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesian</td>
<td>Bahasa Indonesia</td>
</tr>
<tr>
<td>Irish</td>
<td>Gaeilge</td>
</tr>
<tr>
<td>Italian</td>
<td>Italiano</td>
</tr>
<tr>
<td>Japanese</td>
<td>日本語</td>
</tr>
<tr>
<td>Kannada</td>
<td>ಕನ್ನಡ</td>
</tr>
<tr>
<td>Kazakh</td>
<td>Қазақ</td>
</tr>
<tr>
<td>Khmer</td>
<td>ខ្មែរ</td>
</tr>
<tr>
<td>Korean</td>
<td>한국어</td>
</tr>
<tr>
<td>Kurdish</td>
<td>Kurdi</td>
</tr>
<tr>
<td>Lao</td>
<td>ລາວ</td>
</tr>
<tr>
<td>Latvian</td>
<td>Latviski</td>
</tr>
<tr>
<td>Lithuanian</td>
<td>Lietuviškai</td>
</tr>
<tr>
<td>Macedonian</td>
<td>Македонски</td>
</tr>
<tr>
<td>Malayalam</td>
<td>मलयालम</td>
</tr>
<tr>
<td>Marathi</td>
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</tbody>
</table>

[![Screenshot](image-url)](image-url)
Artwork

Artwork/theme contest:

- in Jessie: “Lines” by Juliette Belin
- in Stretch: “softWaves” by Juliette Belin
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Integration:
- desktop-base
- rootskel-gtk
Artwork: softWaves wallpaper
Artwork: softWaves lockscreen
Proposal on debian-devel@lists.debian.org:

- use ifnames instead of mac for network interface names

Temporary problem:

- installer system behaving the old way (e.g. eth0)
- installed system behaving the new way (e.g. ens3)

Results:

- first appeared in Stretch Alpha 1
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Priority adjustments

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- “Packages to install by default for Stretch”
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Consequences:
- reduce default install size: bare metal, chroots, containers, VMs, etc.
- init system: might be fun!
HTTPS support

Bulk of the work:

- `wget udeb (instead of busybox udeb)`
- `ca-certificates-udeb`
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Extra work:
- apt-transport-https, ca-certificates
- HTTPS mirrors?
Buster
Secure Boot (carried over)

Problem:
- lacking support for Secure Boot
- users need to fiddle with EFI settings
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- sign a few packages (linux, shim)
- adjust d-i if needed
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Maybe backportable to Stretch?
GTK+ (carried over)

Currently:

- using version 2 (libgtk2.0-0-udeb)
- early patches for cdebconf-gtk (May 2013), not yet polished
- regular dependency issues for libgtk-3-0-udeb
  - earlier: cairo-object, at-spi, libepoxy
  - then: #847366: gtk apps die with “Couldn’t open libGL.so.1”

To do:

- clean up patch series
- port or rework theme
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Later:
  - input-libinput
  - needs testing outside d-i first
Booting

Current state: different boot methods

Idea:
▶ wave good bye to isolinux/syslinux
▶ use grub for everything instead

Proposed by: Steve McIntyre
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Easy installation speed-up

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Example on ext4:

data=writeback,journal,async,commit,nobarrier

Inspired by: Raphael Geissert, Cyril Brulebois
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Pushing for LVM a bit more

LVM by default for guided partitioning:
- not a big change for casual users
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Thread started on debian-boot@
→ RFC: Switching guided partitioning to LVM by default?
Pre-cached debootstrap

Advantages:

- fewer issues with download from mirrors
- single file, resumable transfer
- cached dependency resolution results
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Inspired by Aurélien Jarno
Helping with busybox maintenance

Busybox:

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Want to help maintain it?
→ #854181: RFH: busybox – Tiny utilities for small and embedded systems
Improving os-prober’s quality

Job:
- probe devices/disks/partitions for other operating systems
- feed bootloader with extra entries

Problems:
- probing can have side effects: data corruption
- many RC bugs

Colin Watson’s plan:
- make it testable
- make it declarative
- make it quick

Mail on debian-boot@
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Mail on debian-boot@ → Thoughts on os-prober 2.0
Speaking of testing

Relying on people when the release happens

New tool: kadit
▶ idea: driving an installer through X11 events
▶ playbooks: yaml files with screenshots

Live demo & example playbooks

Needed:
▶ more playbooks
▶ integration in jenkins: continuous testing
▶ monitoring: broken task-*-desktop in May/June
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D-I Tips and Tricks
Timing, process

Freeze for source building udebs:
  ▶ first mentioned in August 2014
  ▶ explained again in August 2015
    ▶ “Bits from the d-i release manager”
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- first mentioned in August 2014
- explained again in August 2015
  - “Bits from the d-i release manager”

Executive summary:
- all udeb-producing packages frozen
- a few days only (hopefully)
- exceptions are still possible (talk to me)
Tips & tricks

Your package ships an udeb:

▶ it can get a block-udeb for a few days
▶ please contact kibi@debian.org if needed
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