

Quality Assurance in Debian with DARTS

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Outline

- Introduction to QA in Debian
- pbuilder
- DARTS

Introduction to QA in Debian

- <http://qa.debian.org/>: “The goal of our Quality Assurance (QA) is to improve Debian where it is needed, and *to keep the quality of the distribution as high as it should be.*”
- but: “[. . .] at the moment, there is no real quality assurance for Debian, in a conventional meaning of that term.”
- widely distributed (people, places, subprojects)

Aspects of QA in Debian

- social (mailing list, RM guidelines)
- technical
 - tools (pbuilder, piuparts, lintian/linda, DARTS)
 - network resources (`packages.qa.debian.org`)
 - subprojects (FTBFS)

pbuilder

- recommended for every upload
- basic operations:
 - `pbuilder create`
 - `pbuilder update`
 - `pbuilder build`
- Demo . . .

What's DARTS?

- Debian Archive Regression Test Suite
- automated way to find bugs
- utilizing pbuilder
- distributed builddds
- centralized database

Tests

- Currently:
 - FTBFS (testing, unstable, /bin/sh -> dash)
 - linda/lintian errors
 - .deb file list differences (archive / current clean build)
- Possible:
 - Testing a toolchain transition (e.g. to GCC 4.1)
 - Everything applicable to most single packages

What's DARTS, technically?

- Shell script: builddds
- Central RDBMS (currently PostgreSQL)
- Web frontend
 - Generates bug reports automatically!

Tricks

- Let pbuilder chroots operate in a tmpfs
- Use `--variant=buildd` (debootstrap) or `--flavour=build` (cdebootstrap) options
- `pbuilder login` for private investigations

TODO

- More tests
- Automate even more
- Integrate with other tools, subprojects

The End

Contributions welcome!

Thanks!

Questions?