



Debian packaging for beginners

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What is a deb file ?

- A simple but sophisticated method to distribute software.
- Why simple ?
 - Just an ar archive (ar, not tar).
- Why sophisticated ?
 - Holds data and meta data about the software.
 - We'll see more of that later.



How do we create one ?

- The very short version is called checkinstall
 - Does the job, but no standards, especially not the Debian ones.
- The sort answer is dpkg-buildpackage
 - A wrapper for other dpkg utilities.
- The long answer is the rest of the presentation...
 - This isn't a replacement for the Debian docs, but a good starting point.
 - But will start with running dpkg-buildpackage.



debian/changelog

- We work strictly, and a lot of data is taken from the changelog.
- Essentially is about: what package, what version, who did it and to where it's going.
- dch utility is your new best friend...



debian/control

- The file that controls what we'll create.
- Essentially is about: what package to create, for which architecture and what is needed to do that. Also, who's responsible for this package.
- Source package name should be identical the one mentioned in the changelog (duh !)



debian/rules

- One file to rule them all ...
- Essentially is about: what is needed to run to build the deb file.
- The various commands in the file, use the info given in the other files.
- We'll use the short version of the file (compat level ≥ 8), but later go over the “old” format using the `dh_make` templates.

Build output

- Source package:
 - .dsc file
 - Source format 3.0
 - debian.tar.gz
 - orig.tar.gz
 - Debian native
 - tar.gz
- Binary package:
 - One or more .deb files.
- .changes to describe what was done

lintian

- A utility that help check your packages for policy compliance and known problems.
- Can check both source package (*.dsc) and binary packages (*.deb), or *.changes for both.



debdiff

- Utility to compare both binary packages and source packages.
- Helps making sure nothing got broken unintentionally.



Learning by examples

- `apt-get source <package name>`
- Use `dget` to download source and binary packages (also for comparison).



References

- New maintainer's guide
 - <http://www.debian.org/doc/manuals/maint-guide/>
 - maint-guide package
- Debian developer reference
 - <http://www.debian.org/doc/manuals/developers-reference/>
 - developers-reference package
- Debian policy manual
 - <http://www.debian.org/doc/debian-policy/>
 - debian-policy package



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