

Practical session 1: Modifying the grep package

Lucas Nussbaum
lucas@debian.org



Practical session: modifying the grep package

- 1 Go to `http://ftp.debian.org/debian/pool/main/g/grep/` and download version 2.6.3-3 of the package
- 2 Look at the files in `debian/`.
 - ▶ How many binary packages are generated by this source package?
 - ▶ Which packaging helper does this package use?
- 3 Build the package
- 4 We are now going to modify the package. Add a changelog entry and increase the version number.
- 5 Now disable perl-regexp support (it is a `./configure` option)
- 6 Rebuild the package
- 7 Compare the original and the new package with `debdiff`
- 8 Install the newly built package
- 9 Cry if you messed up ;)



Fetching the source

- ➊ Go to `http://ftp.debian.org/debian/pool/main/g/grep/` and download version 2.6.3-3 of the package
- ▶ Use `dget` to download the `.dsc` file:
`dget http://cdn.debian.net/debian/pool/main/g/grep/grep_2.6.3-3.dsc`
- ▶ According to `http://packages.qa.debian.org/grep`, `grep` version 2.6.3-3 is currently in *stable* (*squeeze*). If you have `deb-src` lines for *squeeze* in your `/etc/apt/sources.list`, you can use:
`apt-get source grep=2.6.3-3`
or `apt-get source grep/stable`
or, if you feel lucky: `apt-get source grep`
- ▶ The `grep` source package is composed of three files:
 - ▶ `grep_2.6.3-3.dsc`
 - ▶ `grep_2.6.3-3.debian.tar.bz2`
 - ▶ `grep_2.6.3.orig.tar.bz2`

This is typical of the "3.0 (quilt)" format.

- ▶ If needed, uncompress the source with
`dpkg-source -x grep_2.6.3-3.dsc`



Looking around and building the package

2 Look at the files in `debian/`.

- ▶ How many binary packages are generated by this source package?
- ▶ Which packaging helper does this package use?
- ▶ According to `debian/control`, this package only generates one binary package, named `grep`.
- ▶ According to `debian/rules`, this package is typical of *classic* debhelper packaging, without using *CDBS* or *dh*. One can see the various calls to `dh_*` commands in `debian/rules`.

3 Build the package

- ▶ Use `apt-get build-dep grep` to fetch the build-dependencies
- ▶ Then `debuild` or `dpkg-buildpackage -us -uc` (Takes about 1 min)



Editing the changelog

- ④ We are now going to modify the package. Add a changelog entry and increase the version number.
- ▶ `debian/changelog` is a text file. You could edit it and add a new entry manually.
- ▶ Or you can use `dch -i`, which will add an entry and open the editor
- ▶ The name and email can be defined using the `DEBFULLNAME` and `DEBEMAIL` environment variables
- ▶ After that, rebuild the package: a new version of the package is built
- ▶ Package versioning is detailed in section 5.6.12 of the Debian policy <http://www.debian.org/doc/debian-policy/ch-controlfields.html>



Disabling Perl regexp support and rebuilding

- 5 Now disable perl-regexp support (it is a `./configure` option)
- 6 Rebuild the package
 - ▶ Check with `./configure --help`: the option to disable Perl regexp is `--disable-perl-regexp`
 - ▶ Edit `debian/rules` and find the `./configure` line
 - ▶ Add `--disable-perl-regexp`
 - ▶ Rebuild with `debuild` or `dpkg-buildpackage -us -uc`



Comparing and testing the packages

- 7 Compare the original and the new package with debdiff
- 8 Install the newly built package

- ▶ Compare the binary packages: `debdiff ../changes`
- ▶ Compare the source packages: `debdiff ../dsc`
- ▶ Install the newly built package: `debi`
Or `dpkg -i ../grep_<TAB>`
- ▶ `grep -P foo` no longer works!

- 9 Cry if you messed up ;)

Or not: reinstall the previous version of the package:

- ▶ `apt-get install --reinstall grep=2.6.3-3 (= previous version)`

