# Practical session 1: Modifying the grep package

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## Practical session: modifying the grep package

- 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
- We are now going to modify the package. Add a changelog entry and increase the version number.
- 6 Now disable perl-regexp support (it is a ./configure option)
- 6 Rebuild the package
- Compare the original and the new package with debdiff
- 8 Install the newly built package
- Ory if you messed up ;)



#### Fetching the source

- ① 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.
- 8 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**

- 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

- 6 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
- 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!
- Ory if you messed up ;)

Or not: reinstall the previous version of the package:

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

