Was kann git-buildpackage für Dich tun?

Debian Pakete in einem verteilten Versionskontrollsystem

Guido Günther *<agx@sigxcpu.org>*

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verteiltes Versionskontrollsystem:

- Repository enthält unterschiedliche Versionen des Quellcodes.
- Repository enthält die gesamte Historie des Projektes - platzeffizient.
- Verschiedene Entwicklungszweige (Branches) können verfolgt werden...
- ...diese können wieder zusammengeführt werden (merging).
- Entwicklungsstände können markiert werden (Tags).
- Alle Aktionen sind zunächst lokal.
- Repositories (oder einzelne Branches) können publiziert werden.

- Bestehendes Debian Paket importieren - um mal schnell was zu ändern
- ändern, bauen, testen, ändern, bauen, testen, ändern, ...
- Neue Upstream Version importieren
- debian/changelog schreiben
- Patches hinzufügen, aktualisieren, entfernen

- lokales Paket importieren:

  `git-import-dsc python-dateutil_1.4.1-1.dsc`
- Paket von URL importieren

  `git-import-dsc --download http://....dsc`
- Paket via apt-get importieren:

  `git-import-dsc --download python-dateutil`

Wichtige Git Kommandos:

- Hat sich was geändert:
  git status, *git diff*
- Änderungen aufnehmen:
  git commit
- Historie betrachten:
  git whatchanged, *git log*
- Fehler können korrigiert werden:
  git checkout, *git reset*
- Patch erzeugen:
  git format-patch $\rightarrow$ reportbug

- Changelog schreiben

  ```
  git-dch --snapshot --auto
  ```

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  `git-buildpackage --git-ignore-new`

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  git-buildpackage --git-ignore-new
  ```
- Zufrieden? Dann:

  ```
  git-dch --release -a; git-buildpackage --git-tag
  ```

- lokalen Tarball importieren:

  ```
  git-import-orig python-dateutil_1.5.orig.tar.gz
  ```
- von Upstream URL importieren:

  ```
  git-import-orig --uscan
  ```

Man kann

- direkt Patches auf die Upstream Sourcen anwenden und testen.
- Änderungen leicht rückgängig machen und experimentieren.
- Änderungen zwischen unterschiedlichen Upstream Versionen vergleichen.

```
git diff upstream/1.0..upstream/2.0 [datei|verzeichnis]
```

Wie sieht das Git Repository aus?

Commits, Tags, Branches

```
* 23667ff (HEAD, master) Bump standards version
*   eef58a9 Merge commit 'upstream/1.5'
|\
| * 46ca33a (tag: upstream/1.5, upstream) Imported Upstream version 1.5
* | 23396fc Document changes and release 1.4.1-4
* | e181ff2 Remove comment
* | 539f202 (tag: debian/1.4.1-3) Imported Debian patch 1.4.1-3
|/
* 4e5dda0 (tag: upstream/1.4.1) Imported Upstream version 1.4.1
```

- Upstream Branch: upstream

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- Upstream Branch: upstream
- Debian Branch: master

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- Upstream Branch: upstream
- Debian Branch: master
- Upstream Tag: upstream/<version>

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- Upstream Branch: upstream
- Debian Branch: master
- Upstream Tag: upstream/<version>
- Debian Tag: debian/<debian-version>
- Das sind die Defaults.
- Patches: patch-queue/master
- Binary Delta: pristine-tar

- Patches: *debian/patches/*.{patch,diff}*
- Anzuwenden: debian/patches/series
- dh –with quilt, patchsys-quilt, Source Format 3.0 (quilt)

Quilt Patches

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- Anzuwenden: debian/patches/series
- dh –with quilt, patchsys-quilt, Source Format 3.0 (quilt)

- Patches importieren:
  ```
  gbp-pq import
  ```
- Patches exportieren:
  ```
  git checkout master; gbp-pq export
  ```
- Patches aktualisieren:
  ```
  gbp-pq rebase
  ```

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- Anzuwenden: debian/patches/series
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- Patches importieren:

  `gbp-pq import`
- Patches exportieren:

  `git checkout master; gbp-pq export`
- Patches aktualisieren:

  `gbp-pq rebase`

Simples System - Alternativen: TopGit, TNT

Commit-Message:

```
commit a7fe7c4678a48072c11bb57fd1f99ca7b8118158
Author: Guido Günther <agx@sigxcpu.org>
Date:   Thu Jan 28 19:03:33 2010 +0100

    Add basic bash completion for git-buildpackage

    Thanks: Siegfried-Angel Gevatter
    Closes: #567313
```

debian/changelog:

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* [a7fe7c4] Add basic bash completion for git-buildpackage (Closes: #567313)
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- Tags: *Closes:*, *Thanks:*
- –id-length

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- via Vcs-Git Link ist das Git-Repository auffindbar

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- via Vcs-Git Link ist das Git-Repository auffindbar
- $\rightarrow$ Debian Commits einsehen ohne das Paket herunterladen zu müssen:

```
https://honk.sigxcpu.org/cl2vcs/?pkg=libvirt
```

Konfiguration

- /*etc*/*git-buildpackage*/*gbp.conf*
- ~/.gbp.conf
- \<repo\>/.git/gbp.conf
- \<repo\>/debian/gbp.conf

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- Tag- und Branch Namen
- Tags signieren
- Pristine-Tar verwenden
- Build-Kommando (z.B. mit pbuilder)
- Source-Tree exportieren
- Tarball Kompression
- Importfilter
- Hooks

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```
git-* --help
```

zeigt die aktuellen Defaults.

- gbp-pull, gbp-clone
- /u/s/d/gbp/examples/gbp-posttag-push

- gbp-pull, gbp-clone
- /u/s/d/gbp/examples/gbp-posttag-push
- `https://git.debian.org/`
- git-pbuilder
- pristine-tar
- `http://git.debian.org/?p=users/seanius/`
  `vcs-hooks/git-hooks.git`

- Wiki:
  `https://honk.sigxcpu.org/piki/projects/`
  `git-buildpackage/`
- Manual:
  `http://honk.sigxcpu.org/projects/`
  `git-buildpackage/manual-html/gbp.html`