Pbuilder

Javier López - @chilicuil
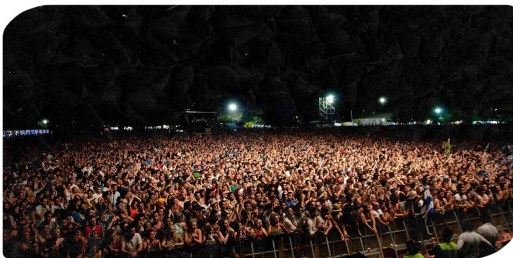
`https://wiki.ubuntu.com/Testing/Activities/Classroom/Saucy`

28th June - Testing Classroom Saucy

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Pbuilder as a Debian-Ubuntu Building dev system

Unichi Uekawa - `http://tinyurl.com/pbuilder`

Alternatives

- pbuilder-dist
- pbuild
- sbuild
- cowbuilder
- qemubuilder
- git-builder
- ...
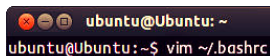
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apt-get mooo

```
ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ sudo apt-get install pbuilder
```

```
ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ sudo dpkg -L pbuilder | less
```

```
/.
/usr
/usr/bin
/usr/bin/debuild-pbuilder
/usr/bin/pdebuild
...
```

Bash wrappers for chroot, debootstrap, dpkg-source, etc

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conf


```
export DEBEMAIL="adam@domain.com"
export DEBFULLNAME="Adam Smith"
export GPGKEY=BC9C8902
```

My full configuration - http://git.io/ONwNiA

conf

```
ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ vim ~/.pbuilderrc
```

```
UBUNTU_SUITES=("raring" "quantal" "precise")
UBUNTU_MIRROR="us.archive.ubuntu.com"
PATH_PBUILDER="/var/cache/pbuilder"
NAME="$DIST"
BASETGZ="$PATH_PBUILDER/$NAME/$NAME-base.tgz"
HOOKDIR="$HOME/.pbuilder-hooks/"
...
```

My full configuration - http://git.io/hluthA

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usage

```
😣➖◻  ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ sudo DIST=saucy ARCH=amd64 pbuilder login
```

```
I: Building the build Environment
I: extracting base tarball [/var/cache/pbuilder
/saucy-amd64/saucy-amd64-base.tgz]
E: failed to find /var/cache/pbuilder/saucy-amd64
/saucy-amd64-base.tgz, have you done <pbuilder
create> to create your base tarball yet?
```

```
😣➖◻  ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ sudo DIST=saucy ARCH=amd64 pbuilder create
```

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use the source Luke

```
😠🔴⚪⬜  ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ mkdir hello && cd hello
```

```
😠🔴⚪⬜  ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ pull-lp-source hello
```

```
😠🔴⚪⬜  ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ cd hello-* && debuild -S -us -uc && cd ..
```

Download and create a deb source (.dsc). Helpul to check if our pbuilder setup works

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building in a pristine env


```
🔴⚫⚫  ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ sudo DIST=saucy ARCH=amd64 pbuilder build hello_2.8-3.dsc
```

```
I: using fakeroot in build.
I: Current time: Thu Jun 27 11:01:00 CDT 2013
I: pbuilder-time-stamp: 1372348860
...
```

Result will be copied by default to:
/var/cache/pbuilder/results/saucy-amd64/

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results

```
😕🔵⚫  ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ ls /var/cache/pbuilder/results/saucy-amd64/
```

```
hello_2.8-3.debian.tar.gz   hello_2.8-3_i386.changes
hello_2.8.orig.tar.gz hello_2.8-3.dsc
hello_2.8-3_i386.deb lintian
```

```
hello_2.8-3_i386.deb
```

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Pbuilder for testing

```
😣🔴🟡🟢  ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ pbuilder.saucy.amd64 create && pbuilder.saucy.amd64 login
```

- Packaging work (pkg bugfixes, backports, etc)
- SRU testing
- Testing of several ubuntu releases
- General sandbox
- After exit, it deletes all changes

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Update your pbuilder env often — Use aliases

```
ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ sudo crontab -l
```

```
0 23 * * * DIST=saucy ARCH=i386 pbuilder update
0 23 * * * DIST=saucy ARCH=i386 pbuilder update
```

```
ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ alias pbuilder.raring.amd64
```

```
='sudo DIST=raring ARCH=amd64 pbuilder'
```

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Speeding up

fast dependecy resolution

```
ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ sudo apt-get install gdebi-core && vim ~/.pbuilderrc
```

```
PBUILDERSATISFYDEPENDSCMD=
"/usr/lib/pbuilder/pbuilder-satisfydepends-gdebi"
```
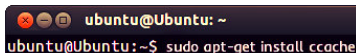
tmpfs env, fast io

```
ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ tail -2 /etc/fstab
```

```
tmpfs ../saucy-amd64/build/ tmpfs defaults,size=1024M
tmpfs ../saucy-i386/build/ tmpfs defaults,size=1024M
```

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Speeding up

reuse of previous compilations

```
😣😑⬤  ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ sudo apt-get install ccache
```

```
sudo mkdir -p "$PATH_PBUILDER/ccache"
sudo chmod a+w $PATH_PBUILDER/ccache"

#~/.pbuilderrc
export PATH="/usr/lib/ccache:$PATH"
export CCACHE_DIR="$HOME/.ccache_ubuntu"
EXTRAPACKAGES="ccache ${EXTRAPACKAGES}"
BINDMOUNTS="${CCACHE_DIR} ${BINDMOUNTS}"
```

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Extra

Gui apps

Outside pbuilder/chroot


```
ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ xhost +
```

Inside pbuilder/chroot


```
ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ export DISPLAY=:0.0
```


```
ubuntu@Ubuntu: ~
ubuntu@Ubuntu:~$ gedit
```

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Help

- `http://tinyurl.com/pbuilder`
- `https://wiki.ubuntu.com/PbuilderHowto`
- #ubuntu-quality, #ubuntu-motu freenode.net
- nicolas.skaggs@canonical.com
- me ;)

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Thank you!

Questions? o@o?

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@chilicuil - #ubuntu-quality

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