pkgsrc4unix

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Problems

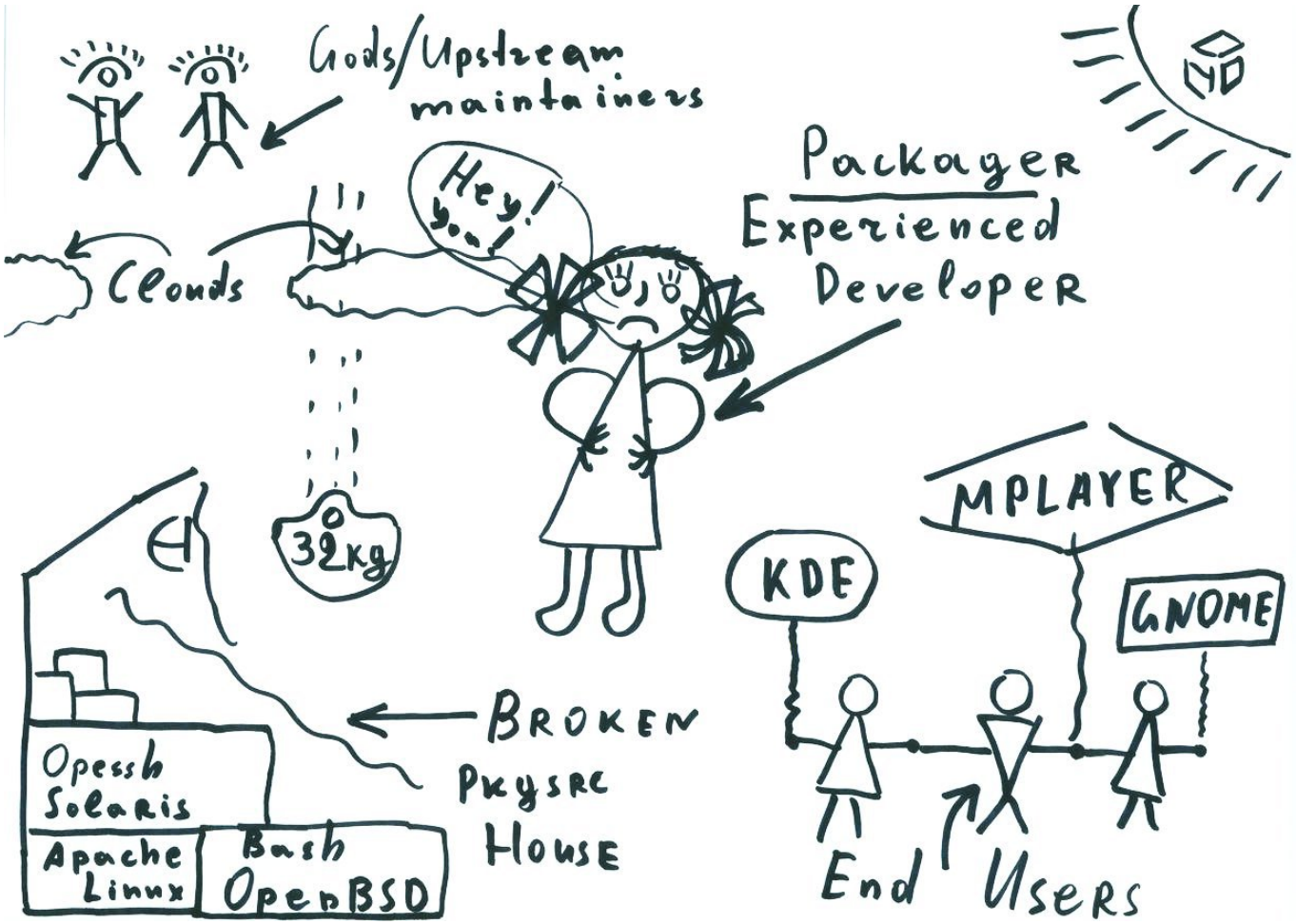
- $\lim_{t \to \infty} \frac{packagers(t)}{packages(t)} = 0$
- Sometimes we need unpackaged software even in largest distributions
- Packaging is a hard process
- Too many diverse and incompatible packaging systems, it's hard to choose the distribution for entire life
- How many *BSD/Debian/Gentoo/Fedora/Arch Linux developers are in this room? ;-)
- What is the reason to package the same software again and again for hundreds of Linux distributions, NetBSD, Solaris, and others after all?

Possible solutions

- Open Build Service (OBS). Unfortunately it is Linux-specific.
- ABF from ROSA. The same problem as above.
- Korinf. Does AltLinux/Etersoft care about non-Linux portability?

Real solution!

- Cross-platform packaging system. PkgSrc!



PkgSrc disadvantage (minor)

- PkgSrc is a parallel world. It has its own package format and binary packages managers, therefore pkgdb.

Package format. Package managers. Build specifications.

format	build spec	low-level mngr	high-level mngr
.rpm	RPM spec	rpm(8)	yum, zypper, apt
.deb	debian/rules	dpkg(8)	apt, aptitude
.tgz (NetBSD)	pkgsrc Makefiles	pkg_*(8)	nih, pkgin
...	...	...	...

What if we separate package build mechanism from package format and package management?

pkgsrc4unix components

- Build mechanism: pkgsrc (including bulk builds)
- Package format: native
- Low-level and high-level package management: native (rpm/yum, dpkg/apt etc.)
- Package convertor: EPM (http://epmhome.org)

pkgsrc4unix features

- PkgSrc infrastructure is used for package build
- PkgSrc tools are used for bulk builds
- epm(1): .tgz -> .rpm
- createrepo(8): .rpm -> yum repository
- pkgsrc way is used everywhere: handling configuration files, registering info files, fonts, daemon startup scripts etc.
- pkgsrc4unix doesn't conflict with existing repositories (repoforge, epel, elrepo etc.) because every package has a prefix "nb-" in its name and all files are installed to "/opt/pkgsrc4unix".

pkgsrc4unix prototype (pre-alpha stage of development!!!)

System: RHEL-6, .rpm, rpm(8), yum(8)

```
# cat /etc/redhat-release
Scientific Linux release 6.4 (Carbon)
# cd /etc/yum.repos.d/
# wget http://pkgsrc4unix.mova.org/packages/
   RHEL/6/x86_64/pkgsrc4unix.repo
# yum install nb-mk-configure
...
================================================================
 Package                  Arch     Version      Repository
================================================================
 Installing:
    nb-mk-configure       x86_64   0.24.0-1     pkgsrc4unix
 Installing for dependencies:
    nb-bmake              x86_64   20110606-1   pkgsrc4unix
    nb-bootstrap-mk-files x86_64   20120415-0   pkgsrc4unix
...
Complete!
#
```

pkgsrc

pkgsrc4unix prototype (pre-alpha stage of development!!!)

System: RHEL-6, .rpm, rpm(8), yum(8)

```
# rpm -qa | grep ^nb-
nb-bmake-20110606-1.x86_64
nb-bootstrap-mk-files-20120415-0.x86_64
nb-mk-configure-0.24.0-1.x86_64
# rpm -qi nb-mk-configure
Name        : nb-mk-configure
Version     : 0.24.0
Release     : 1
Vendor      : pkgsrc4unix
...
Packager    : Aleksey Cheusov <cheusov@NetBSD.org>
Summary     : Lightweight but powerful replacement
              for GNU autotools
Description :
mk-configure is a lightweight replacement for GNU autoconf,
written in and for bmake (NetBSD make).
...
#
```

pkgsrc4unix prototype (pre-alpha stage of development!!!)

System: RHEL-6, .rpm, rpm(8), yum(8)

```
# rpm -ql nb-mk-configure | head -18
/opt/pkgsrc4unix/bin
/opt/pkgsrc4unix/bin/mkc_check_common.sh
/opt/pkgsrc4unix/bin/mkc_check_compiler
/opt/pkgsrc4unix/bin/mkc_check_custom
/opt/pkgsrc4unix/bin/mkc_check_decl
/opt/pkgsrc4unix/bin/mkc_check_funclib
/opt/pkgsrc4unix/bin/mkc_check_header
/opt/pkgsrc4unix/bin/mkc_check_prog
/opt/pkgsrc4unix/bin/mkc_check_sizeof
/opt/pkgsrc4unix/bin/mkc_check_version
/opt/pkgsrc4unix/bin/mkc_install
/opt/pkgsrc4unix/bin/mkc_test_helper
/opt/pkgsrc4unix/bin/mkc_which
/opt/pkgsrc4unix/bin/mkcmake
/opt/pkgsrc4unix/man
/opt/pkgsrc4unix/man/man1
/opt/pkgsrc4unix/man/man1/mkc_check_custom.1
#
```

Questions?)

```
# export PATH=/opt/pkgsrc4unix/bin:$PATH
#
```