

Introducing EdgeBSD

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Pierre Pronchery <khorben@edgebsd.org>
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Who am I

- Pierre Pronchery
- DeforaOS project since 2001
- NetBSD developer since May 2012
(khorben@)
- And now EdgeBSD as well



But what is EdgeBSD?

- It is a fork of NetBSD
 - A full copy of NetBSD's src and pkgsrc
 - Including history
 - New development branches
 - It is not a fork of NetBSD
 - So far, barely any change to the code
 - Not different from your own checkout
- (what is a fork anyway?)



NetBSD primer

- Project started in 1993
- Follow-up to the CSRG lab at Berkeley
- First modern Open Source project
- Gave birth to OpenBSD in 1995
- About 256 developers today
- Cathedral type of development
- Centralized repository (CVS)



NetBSD is great and beautiful

- Strong focus on quality
- Clean architecture ...hence portable
- Transparent cross-compilation
- Attracted lots of cool research
- Tons of awesome modern features
 - ASLR, CGD, Xen, RUMP, ZFS, Dtrace...

Thanks to...



NetBSD development model

- Only official developers can commit
- It takes a while to be accepted as one
- Commits need usually be reviewed
- Work on the code is always public
- Branches are allowed but stay forever
- Existing features not allowed to break

Don't get me wrong, this is all fine. But...



It harms development

- If you have occasional contributions
 - You can't easily become a developer
 - Someone has to be available to commit
- If such contributions are major
 - You can't easily let them be reviewed
 - Reviewers can't easily test and patch
- Even if you are an official developer
 - You can't tinker, commit, break, revert...



More potential harm

- NetBSD maintains its own versions of:
 - Gcc, Xorg, Bind, Postfix... in the base system
- It's fine as long as the manpower to maintain is there
- ...but I can't run NetBSD on my workstation (2008) or laptop (2009) anymore with an upstream Xorg

I want to run NetBSD as my main system!



Obvious issue: CVS

- I like CVS: simple and easy to fix
- I don't like Git: inconsistent and opaque

But it's just so good to be able to:

- Work offline with history and branches
- Branch almost for free
- Stash and stage and commit and combine and and and...



Where EdgeBSD kicks in

- It is a staging area for NetBSD (then of course it might go its own path)
- Decentralized VCS: Git (for popularity)
- More open, more affordable, more fun
- Allow just about anyone to work in branches together
- Polish patches for inclusion in NetBSD

More research, more development



Development model

- Keep NetBSD's original code in a pristine Git mirror (netbsd-src, -pkgsrc)
- Track master and select branches in EdgeBSD's Git repositories
- Allow contributors to push branches
- Dedicate some branches for inclusion (to either edgebsd/master or NetBSD)
- master as EdgeBSD's tentative -current



Enable and test more features

- Many existing features are not enabled by default in NetBSD:
 - ASLR (known bugs)
 - SSP (imposes restrictions)
 - Securelevels (not always desirable)
 - Veriexec (fair enough)
 - Modular kernels (“might break”)
 - Modular Xorg from packages (broken)

Let them be tested and unbroken.



Push Open Source development

- Pioneer new approaches to OSS development:
 - Provide e-mail, calendar, secure IM, VoIP, conferencing... to contributors
 - Automated checks and procedures
 - “Build me this patch on XYZ architectures”
 - “Push this patch to master iff it built everywhere”

Not easy, lots of work and infrastructure, but I need and want to offer this



Release engineering

- Yes indeed, I want to work towards stable releases too:
 - Based on NetBSD's stable branch
 - With extra features enabled
 - With continuous security & bugfix updates
 - With stable, testing and new packages
 - With easier ways to install and deploy



What I want to see in a release

- Graphical and text-based installers
- Default environment with known hardware and software support
- Ready-to-flash images for range of devices
- Milestones and continuous updates



It's not vaporware

- On the web: <http://www.edgebsd.org/>
- Git repositories: <http://git.edgebsd.org/>
 - `$ git clone http://git.edgebsd.org/EdgeBSD/ edgebsd-src.git and edgebsd-pkgsrc.git`
- We have a port to the Im32 CPU
- We have signed binary packages
- More to come hopefully



Special thanks

- Git community, of which gitweb and Gitolite in particular
- Joerg Sonnenberger for his work on converting NetBSD to different VCSes
- NetBSD for having such a high standard
- Everyone who joined already



Questions, Contact

- Sorry for the rough, rushed presentation
- Thanks for your patience and support
- Reminder: all of this is new, ambitious, but also open!
- Speak your mind now or later:
 - IRC #EdgeBSD on freenode
 - e-mail khorben@edgebsd.org
(I'll setup mailing-lists ASAP)

