NetBSD 8
What’s in Store?
Dispelling the Myths

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EuroBSDcon
September 2017
Long time to release
Long time to release

- 7.0 released September 25 2015
- 7.0.1 released May 22 2016
- 7.0.2 released October 21 2016
- 7.1 released March 11 2017
- 8.0 Release process started June 6th 2017
- Current status - about to be released
No packages available
No packages available
Old hardware only
Old hardware only

- Tegra K1 (SoC), NVIDIA Jetson TK1 (Dev Board)
- Allwinner - A31, A83T, H2+ and H3 (all SoC)
- A13, A64, R8 and GR8 in current
- A20 support is in 7, plans for FDT-ing
But no-one’s heard of them

- A83T: BananaPi BPI-M3
- H2+: Xunlong Orange Pi Zero
- H3: FriendlyARM, Sinovoip, Xunlong
  - NanoPi NEO (256MB) up to
  - OrangePi Plus 2E (2GB)
From the horse's mouth

- ftp http://agc.ac/2017/jmcneill-20170919.script
- script -p jmcneill-20170919.script
Other hardware

- Intel QAT card support
- Support for VAXstation 4000 TURBOchannel
- USB and GPIO
No LLVM/clang support
LLVM/Clang 5.0 intree

- Joerg maintaining
- Still optional, off by default
- Regular testing with pkgsrc bulk builds
- Particularly good at finding compiler regressions
LLVM/Clang 5.0 intree

- Kamil has been working for TNF
  - lldb and debugging infrastructure
  - Upstreaming sanitizer support
    - asan, ubsan working
    - tsan, and msan
No virtualisation
No virtualisation

- Xen
- Usermode
- RUMP
- No Bhyve/VMM/KVM equivalent
No signing
No signing
Outdated utilities in base
Outdated utilities in base
Networking is outdated
Networking is outdated

- No BBR or RACK in TCP congestion
- bouyer’s sockcan implementation
- dhcpcd’s home
Difficult to develop
Difficult to develop for

- build.sh
- cross-OS building AND cross-arch building
- distrib/utils/embedded/mkimage
- pkgsrc/sysutils/{mklivecd,mkmemstick}
- All the u-boot packages
Difficult to develop for
Run by morons
Run by morons

- Others take a large amount of time and effort
- Board and core team (like a company)
- AGMs every year
- Board elections every year
No modern file systems
No modern file systems

- No Hammer
- ZFS is out of date (but being updated)
- LFS was worked on during Google SoC
- Puffs/Pud allow FUSE filesystems reliably
No Dtrace
No Dtrace

To: source-changes%NetBSD.org@localhost
Subject: CVS commit: src/doc
From: "Sevan Janiyan" <sevan%netbsd.org@localhost>
Date: Sun, 17 Sep 2017 15:30:08 +0000

Module Name: src
Committed By: sevan
Date: Sun Sep 17 15:30:08 UTC 2017

Modified Files:
   src/doc: CHANGES

Log Message:
Note installation of scripts from the DTrace Toolkit in base.

To generate a diff of this commit:
cvs rdiff -u -r1.2317 -r1.2318 src/doc/CHANGES

Please note that diffs are not public domain; they are subject to the
copyright notices on the relevant files.
No Dtrace support

- Added syscall support [christos 20150307]
- Added lockstat support [christos 20150308]
- Toolkit scripts from sevan in last few days
No NVME support
No NVME support
No NCQ support
Hi,

I've committed the initial NCQ support, it's available at jdolecek-ncq branch (branch only over sys). It works under Parallels for now, and is ready for brave adventurers. There is sys/dev/ata/TDOO.ncq which you might want to check, also.

If people want to try it out and give feedback, I'd really appreciate it.
Developers out of touch
Developers out of touch

• Any developers here?

• Did you bring all private keys and 2FA tokens?
No DVCS Repos
No DVCS Repos

The NetBSD Foundation

Repositories: 6  People: 11

Search repositories...

Type: All - Language: All -

pkgsrc-wip
Work-in-progress packages for pkgsrc, the portable package system from NetBSD [mirror]
Stars: 22  Downloads: 17  Updated 1 hour ago

src
Automatic conversion of the NetBSD src CVS module, use with care
Stars: 55  Downloads: 12  Updated 2 hours ago

pkgsrc
Automatic conversion of the NetBSD pkgsrc CVS module, use with care
Stars: 39  Downloads: 15  Updated 3 hours ago

xsrc
Automatic conversion of the NetBSD xsrc CVS module, use with care
Stars: 1  Downloads: 7  Updated 7 days ago

libcdb
Portable release of the NetBSD constant database
Updated on Feb 16, 2015
No DVCS Repos
No DVCS Repos

[Image of IIJ-NetBSD repository page]

- **netbsd-src**: Automatically converted from anoncvs.NetBSD.org every two hours on weekdays (HEAD). On weekends, sync branches.
  - Stars: 77
  - Watchers: 60
  - Updated an hour ago

- **cvs2git**: From cvs to git script
  - Language: Perl
  - Stars: 1
  - Watchers: 6
  - Updated on Feb 8, 2016

[Note: This organization has no public members. You must be a member to see who's a part of this organization.]
Testing is crap
Testing is crap

<table>
<thead>
<tr>
<th>Port</th>
<th>Version</th>
<th>NetBSD login</th>
<th>Frequency</th>
<th>Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>arv04</td>
<td>HEAD</td>
<td>geon, admns</td>
<td>1x daily</td>
<td>QEMU/Anita</td>
</tr>
<tr>
<td>066</td>
<td>HEAD</td>
<td>geon, admns</td>
<td>1x daily</td>
<td>QEMU/Anita</td>
</tr>
<tr>
<td>coproc</td>
<td>HEAD</td>
<td>geon, admns</td>
<td>1x daily</td>
<td>QEMU/Anita</td>
</tr>
<tr>
<td>exwins-carm/v4</td>
<td>HEAD</td>
<td>geon, admns</td>
<td>1x daily</td>
<td>QEMU/Anita</td>
</tr>
<tr>
<td>prux</td>
<td>HEAD</td>
<td>geon, admns</td>
<td>1x daily</td>
<td>qemul/Anita</td>
</tr>
<tr>
<td>tcpunix</td>
<td>HEAD</td>
<td>geon, admns</td>
<td>1x daily</td>
<td>qemul/Anita</td>
</tr>
</tbody>
</table>

**Regular individual test runs**

Disclaimer: The logs are provided by individuals and are not an official service of The NetBSD Project.

**Tests against NetBSD-current**

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<tbody>
<tr>
<td>alpha</td>
<td>HEAD</td>
<td>martin</td>
<td>weekly</td>
<td>Digital AlphaServer DSGD</td>
</tr>
<tr>
<td>exwins</td>
<td>HEAD</td>
<td>martin</td>
<td>weekly</td>
<td>QUITERTRIX</td>
</tr>
<tr>
<td>shank</td>
<td>HEAD</td>
<td>martin</td>
<td>weekly</td>
<td>DWARD shant</td>
</tr>
<tr>
<td>sont54</td>
<td>HEAD</td>
<td>martin</td>
<td>weekly</td>
<td>Sun v210</td>
</tr>
<tr>
<td>xen</td>
<td>HEAD</td>
<td>bouyer</td>
<td>daily</td>
<td>XEN</td>
</tr>
</tbody>
</table>

**Tests against netbsd-8**

<table>
<thead>
<tr>
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<th>Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>alpha</td>
<td>netbsd-8</td>
<td>martin</td>
<td>weekly</td>
<td>Digital AlphaServer DSGD</td>
</tr>
<tr>
<td>exwins</td>
<td>netbsd-8</td>
<td>bouyer</td>
<td>daily</td>
<td>QEMU</td>
</tr>
<tr>
<td>shank</td>
<td>netbsd-8</td>
<td>bouyer</td>
<td>daily</td>
<td>QEMU</td>
</tr>
<tr>
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<td>daily</td>
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<td>netbsd-8</td>
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<td>daily</td>
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</tr>
</tbody>
</table>
Testing is crap
Reproducible Builds

- 302 Return Code to Christos’s talk
- Way more complex than I expected
- First BSD to complete Debian run
- First “big unix” to complete Debian run
- Minix uses NetBSD user land and build system
No FDT
No FDT

- sys/arch/arm/fdt/
- sys/arch/evbarm/fdt/
- sys/dev/fdt/
- sys/external/bsd/libfdt
Everything else

• ptrace(2) fixes from kamil
• nat’s new sound driver, bta2dpd(8)
• msaitoh’s updates for ixg(4) and ixv(4)
• alnsn’s addition of AES-XTS to cgd(4)
Everything else

• jmcneill’s new SDMMC driver
• maxv’s amd64/i386 overhaul
• xen kernel modulkes (maxv)
• flxd’s getrealloc/setrealloc changes to scsioctl(8)
Everything else

• lua now at 5.3.4 in kernel


• ext4fs - jdolocek’s extents, dir_nlink and gdt_csum/uninit_bg support

• flxd’s Turbochannel USB/GPIO option
Everything else

• ozaki-r MPSAFE network changes
• nick-nhusb merge - some USB3 support
• GPT support, including booting
• PCI support for DNARD/Shark
Everything else

• ip6addrctl - from FreeBSD
• christos’s blacklistd
• maxv’s security work
Everything else

- vioscsi - christos/jdolecek
- Google compute engine - bsiegert
- nouveau - riastradh
Summary

- Lots new in NetBSD 8
- Lots of people working very hard
- Available RSN