

What's new in FreeBSD 11

Baptiste Daroussin
bapt@FreeBSD.org
bapt@gandi.net



sysadmin #6
Paris
19 Février 2016

Architectures

- ▶ End of IA64
- ▶ Add arm64
- ▶ Add Risc-V
- ▶ Improved ARM support: dtrace, plenty of new drivers
- ▶ CloudABI

toolchain

- ▶ clang 3.8.0
- ▶ lldb activated by default for amd64, arm64
- ▶ all but ld(1) and objdump(1) binutils components replaced by Elftoolchain
- ▶ external toolchain

Network

- ▶ IPX removed
- ▶ AppleTalk removed
- ▶ UDP-lite added
- ▶ New version of netmap
- ▶ libpcap supporting natively netmap
- ▶ netstat -R montre les informations RSS/flow
- ▶ TCP Fast Open
- ▶ Modular TCP stack
- ▶ TCP fastpath

Storage

- ▶ Great performance improvements on NFS
- ▶ Great improvements in ctld
- ▶ Lots of ZFS updates
- ▶ I/O throttling via rctl(8) (bytes or operations)
- ▶ High Availability Clustering in CTL

Virtualisation

- ▶ Xen dom0
- ▶ bhyve:
 - ▶ UEFI support (Windows and Illumos guest)
 - ▶ Netmap support
 - ▶ VirtFS (probably)
- ▶ Improved HyperV support
- ▶ jails:
 - ▶ support extra ifconfig args in ip4.addr/ip6.addr (allowing CARP)
 - ▶ top and ps can now filter output by jail
 - ▶ kern.osrelease and kern.osreldate can now be configured per jail
 - ▶ lots of vnet(9) fixes
- ▶ Unmapped I/O support in virtio
- ▶ virtio-random
- ▶ virtio-console
- ▶ Complete rewrite of sendfile(2) (async)

New utilities

- ▶ fstyp(8)
- ▶ devctl(8)
- ▶ uefesign(8)
- ▶ new autofs(5)/automount(8)
- ▶ sesutil(8)
- ▶ numactl(8)
- ▶ autofs(5)
- ▶ casperd(8)
- ▶ mprutil(8)/mpsutil(8)

Misc

- ▶ ZFS support for UEFI boot/loader
- ▶ Geli support for for the loader
- ▶ Boot Environment support for loader
- ▶ man(1) using mandoc(1) as a default renderer
- ▶ apropos(1) fine grain search
- ▶ Unicode collation
- ▶ New reroot mechanism
- ▶ Improved linux emulation (epoll, linux64)
- ▶ IPSEC in GENERIC
- ▶ IPSEC support aesni(4)
- ▶ linuxkpi
- ▶ onifconsole/3wire in ttys
- ▶ dtrace for userland
- ▶ NUMA improvements
- ▶ Dragonfly Mail Agent

Probably for 11

- ▶ Encrypted Kernel Crash Dumps
- ▶ Routing refactoring: able to forward 12MPPS on 16-core box for both IPv4/IPv6 which is 6-10 times better than stock HEAD
- ▶ Packages for base
- ▶ sendmail off by default
- ▶ stable VIMAGE

When

27 July 2016