

# Introducing BonesBSD

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`github.com/esote/bonesbsd`

# Overview

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BonesBSD is a fork of the OpenBSD kernel on `-current`.

The goal is to maintain the most useful or critical functionality, removing unused parts of the kernel.

Change	Diff	
Initial commit	+3,174,432	
Remove macppc, socppc	+13	-47,349
Remove powerpc	+15	-12,039
Remove hppa	+13	-53,093
Remove alpha	+26	-63,034
Remove loongson, mips64, octeon, sgi	+15	-129,373
Remove sparc64 and afb microcode	+27	-125,641

Change	Diff
Remove m88k, luna88k	+3 -46,583
Remove landisk	+8 -8,805
Remove arm	+14 -90,010
Remove sh	-20,274
Remove NTFS	+2 -4,414
Remove NFS and nfssvc(2)	+22 -18,064
Remove FUSE	+7 -3,331
Remove drm (inteldrm, radeondrm)	+6 -394,799

Lines before: 3,174,432

Lines after: 336,921 (89% decrease)

Compiled size before: 14.7M (amd64)

Compiled size after: 10.9M (25% decrease)

Still functions the same on amd64 and i386.

# Breaking Userspace

Breaking userspace is inevitable. If you want to use an architecture no longer supported: too bad.

For cases of noticeable errors in userspace, if they're avoidable I generate a patch.

Ex: `patches/0001-Remove-rc-NFS-reference.patch`

# Installation

- 1 Install OpenBSD
- 2 Clone BonesBSD
- 3 `cd bonesbsd/sys/arch/$(machine)/compile/GENERIC.MP/`
- 4 `make obj`
- 5 `make config`
- 6 `ln -sf /usr/bin/gcc /usr/bin/cc`
- 7 `make` (until error occurs assembling `locore.S`)
  - Might care enough to actually fix this later
- 8 `ln -sf /usr/bin/clang /usr/bin/cc`
- 9 Remove line 43 from `obj/Makefile` (`-msave-args`)
- 10 `make`
- 11 `make install`

Old kernel is moved to `/obsd`.



Still plenty of things to remove:

- **ipv6** (ie `sys/netinet6/`)
- IBM eFUSE
- isofs (ie `sys/isofs/`, both `cd9660` and `udf`)
- Xenocara, aperture driver, etc. X.org remnants
- msdosfs (ie `sys/msdosfs/`)
- Hyper-V virtualization (ie `sys/arch/$(machine)/`)
- VMware tools (ie `sys/arch/$(machine)/`)

# What's next

## Undecided:

- mouse? (pseudo-devices, wsmouse daemon, drivers, etc.)
- wireless? (IEEE 802.11, ie `sys/net80211/`)
- audio? (and `sndio`) — will likely require userspace patches
- fifofs? (ie `sys/miscfs/fifofs/`)
- deadfs? (ie `sys/miscfs/deadfs/`)

## Complex:

- Merge upstream changes occasionally (maybe only every time OpenBSD has a release)
- Rewrite certain userspace things that break, so they don't depend on removed syscalls.