# Adventures in building open source software

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## Building with clang

```
- check_options();
+ check_options(datalen, data, b);

- memset(ctx, 0, sizeof(ctx));
+ memset(ctx, 0, sizeof(*ctx));
```

SIOCSIFADDR struct ifreq \*
Set the interface address for a protocol family.
Following the address assignment, the "initialization" routine for the interface is called.

This call has been deprecated and superseded by the SIOCAIFADDR call.

struct ifreq vs struct ifaliasreq

strlcpy(3) - #include <string.h> on modern operating systems



#### sevan.mit.edu

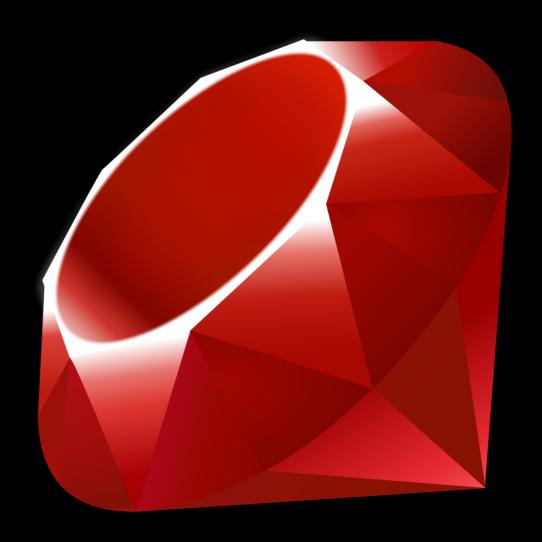
Total number of packages: 15114 Successfully built: 8501

Packages breaking the most other packages

Package	Breaks Maintainer

graphics/MesaLib	2176 pkgsrc-users% <u>NetBSD.org</u> @localhost
devel/cmake	819 pkgsrc-users%NetBSD.org@localhost
lang/ruby200-base	568 taca%NetBSD.org@localhost
lang/gcc48-libs	511 sbd%NetBSD.org@localhost
lang/ruby193-base	505 taca%NetBSD.org@localhost
lang/ruby21-base	502 taca%NetBSD.org@localhost
devel/boost-jam	367 pkgsrc-users%NetBSD.org@localhost
x11/qt4-libs	359 pkgsrc-users%NetBSD.org@localhost
multimedia/x264-devel	131 joerg%NetBSD.org@localhost
lang/php55	117 pkgsrc-users%NetBSD.org@localhost

http://mail-index.netbsd.org/pkgsrc-bulk/2014/09/08/msg010950.html



# Berkeley DB's ndbm.h (since 1.85 at least) defines DBM\_SUFFIX.
# Note that \_DB\_H\_ is not defined on Mac OS X because
# it uses Berkeley DB 1 but ndbm.h doesn't include db.h.

pkgsrc-2015Q1

11224 binary packages built with gcc for Darwin 8.11.0/powerpc 10019 binary packages built with gcc for Darwin 10.8.0/i386

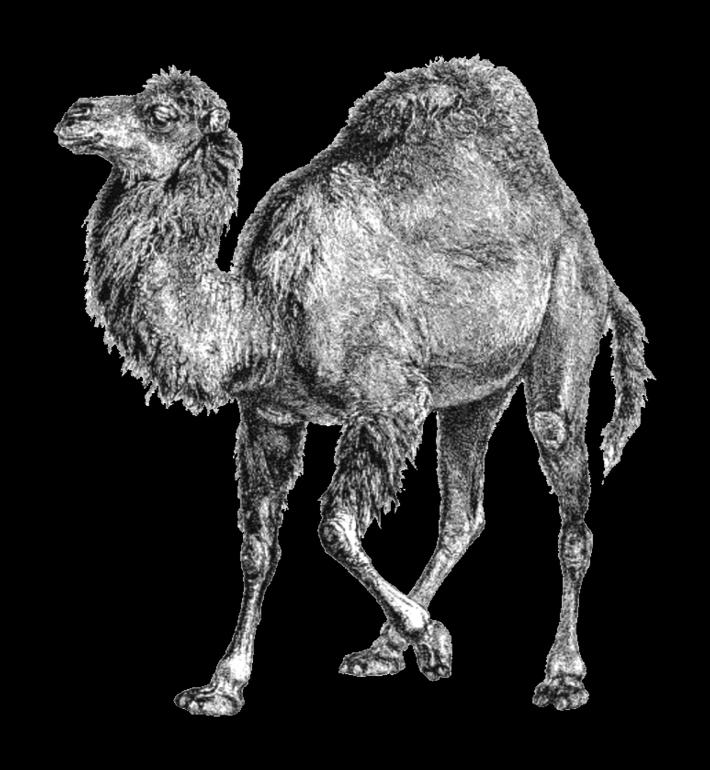
### Autoconf

The configure tests for wctype.h & checks for the suitability of

```
wctype t & wctrans t.
It detects the presence of wctype.h but wctype t & wctrans t are
unsuitable at which point it tries to use its own bundled copy of
wctype.h. The build then fails as there's conflicting types for wctype t
& wctrans t.
In file included from quotearg.c:43:
./wctype.h:724: error: conflicting types for 'wctype t'
/opt/freeware/lib/gcc/powerpc-ibm-aix6.1.0.0/4.2.0/include/ctype.h:119:
error: previous declaration of 'wctype t' was here
./wctype.h:773: error: conflicting types for 'wctrans t'
/usr/include/wctype.h:52: error: previous declaration of 'wctrans t' was
here
bundled wctype.h:724 typedef void * wctype t;
bundled wctype.h:773 typedef void * wctrans t;
system wctype.h:52 typedef wint t (*wctrans t)();
gcc ctype.h:119 typedef unsigned int wctype t;
```

### config.guess

Attempt to guess a canonical system name.





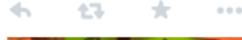
Package

Breaks Maintainer





@sevanjaniyan I thought you might like this— via Warner Losh on Facebook







#### Terminal — $ssh = 107 \times 28$



_topas_nmo	on-1=Top-E	Basics	Host=159fvp023_pu	b—Refr	esh=2	secs-11:43.36-
Memory						
	Physical	PageSpace	pages/sec	In	Out	FileSystemCache
% Used	99.2%	0.3%	to Paging Space	0.0	0.0	(numperm) 25.5%
% Free	0.8%	99.7%	to File System	0.0	0.5	Process 45.8%
MB Used	2030.8MB	7.6MB	Page Scans	0.0	- 1	System 27.9%
MB Free	17.2MB	2552.4MB	Page Cycles	0.0	1	Free 0.8%
Total(MB)	2048.0MB	2560.0MB	Page Steals	0.0	1	
			Page Faults	0.0	1	Total 100.0%
						numclient 0.7%
Min/Maxper	rm 501	<b>IB( 3%)</b> 1	511MB( 90%) <% of	RAM	1	maxclient 90.0%
Min/Maxfre	ee 960	1088	Total Virtual	4.5GB	1	User 55.0%
Min/Maxpga	ahead 2	8	Accessed Virtual	1.4GB	32.2%	Pinned 55.4%
					I	lruable pages 429664.0

bootstrap with CC=/usr/bin/gcc No error

Change shell to pdksh:

bmake: don't know how to make pbulk-index. Stop

pbulk-scan: realloc failed:

Free RAM, raise resource limits to 256MB:

/usr/pkgsrc/pbulk/libexec/pbulk/scan[54]: 11272416 Segmentation fault(coredump)

Coredump is available but dbx is not installed.

Unable to install dbx because dependencies missing.

bootstrap again without \$CC set:

/bin/sh: There is no process to read data written to a pipe..

bootstrap again without \$CC set & script modified to use pdksh by default Memory fault (core dumped).

Id: 0711-596 SEVERE ERROR: Object xxx.o
An RLD for section 2 (.data) refers to symbol 111,
but the storage class of the symbol is not C\_EXT or C\_HIDEXT.
The source file contains implicitly initialized global symbols

http://www.perzl.org/aix/index.php?n=Main.GCCAssemblerError

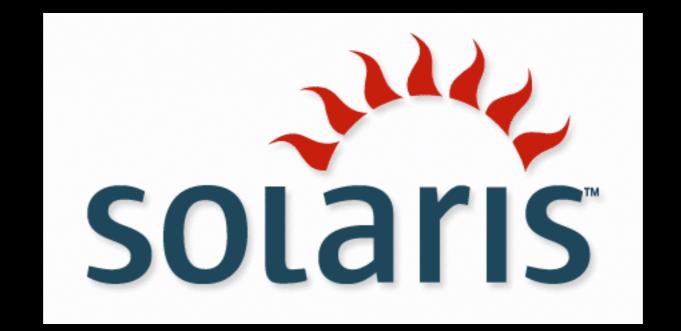


FreeBSD/amd64

Total number of packages:

Successfully built:

16319



Solaris 11 SPARC

Total number of packages: 15264

Successfully built: 7190

Solaris 11 x86

Total number of packages: 15264

Successfully built: 5911

Solaris 10 SPARC

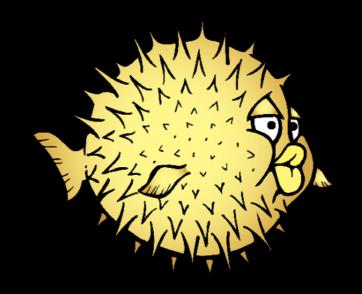
Total number of packages: 15264

Successfully built: 8094

**OmniOS** 

Total number of packages: 16312

Successfully built: 8056



OpenBSD/sparc64

Total number of packages:

Successfully built:

15246

5899

OpenBSD/amd64

Total number of packages:

Successfully built:

16274



Bitrig/amd64

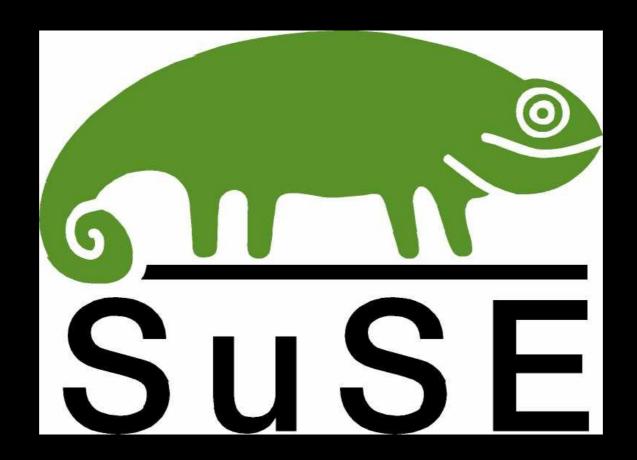
Total number of packages:

Successfully built:

16319



Total number of packages: 16312 Successfully built: 11863



Linux/ppc64le

Total number of packages:

Successfully built:

15036

Notes https://www.geeklan.co.uk/?tag=pkgsrcBulk build reports <a href="http://pkgsrc.geeklan.co.uk">http://pkgsrc.geeklan.co.uk</a>

### Mandoc support for Solaris improved

http://permalink.gmane.org/gmane.comp.tools.mdocml.devel/802

### FreeBSD - pax(1) gets -o flag

https://bugs.freebsd.org/bugzilla/show\_bug.cgi?id=198481

### DragonFlyBSD - Deadlock issues fixed

http://lists.dragonflybsd.org/pipermail/commits/2015-May/418663.html http://lists.dragonflybsd.org/pipermail/commits/2015-June/418676.html

BSD Make - Found use of memcpy between overlapping buffers <a href="https://bugs.freebsd.org/bugzilla/show\_bug.cgi?id=199486">https://bugs.freebsd.org/bugzilla/show\_bug.cgi?id=199486</a>

OpenSSH-portable - updating config.guess added to checklist <a href="https://bugzilla.mindrot.org/show\_bug.cgi?id=2409#c3">https://bugzilla.mindrot.org/show\_bug.cgi?id=2409#c3</a>

I'm surprised we didn't catch it until now. your pkgsrc work gave us a dividend :-). It's a serious bug but only having a dozens of processes on a big multi-core machine like monster can trigger it for review: http://apollo.backplane.com/DFlyMisc/fflag01.patch that's what I'm compiling on monster now. will commit later this evening was triggered by Sevan's pkgsrc build. apparently calling fcntl F\_SETFL or flock() on a log file that is being appended to by lots of processes all at once was the trigger. caused them to get stuck do to an improper update of the fp->f\_flag field.

hopefully that is what the cause was. we will know by tomorrow

you hit a procfs bug it looks like. I'm looking at it hmm. something else is going on. there's a token live lock. how very odd I believe I've found the issue.

It's actually a bug in vm\_fault in an optimized copyout\_nofault path there's an optimization that is supposed to allow trivial vm\_faults but in this case the vm\_fault had to do a copy-on-write after a fork, which is not trivial, and then deadlocked on a lock.

basically there is an optimization for uiomove() (moving data to userspace) and copyin and copyout that allows those functions to be called with VM objects held without deadlocking, causing them to fail if they would otherwise deadlock the caller then undoes his fast path and reexecutes on the slow path with normal uiomove()'s and such its used to allow (mainly) tmpfs to issue uiomove() ops deep in its VM object / VM page handling code to handle reads and writes optimally there was a case not being handled by vm\_fault related to when the vm\_map\_lookup() has to shadow a VM page due to a copy on write. we've run lots of dports bulk builds without hitting this issue. I think there is just something the pkgsrc bulk build is doing which is revealing the issues hopefully there won't be very many more, the whole idea is for it to be a stable platform for bulk builds:-)