

# Panic with amr and 5.4-PRERELEASE

**Source:** <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/current/2005-03/0358.html>

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**From:** Philippe PEGON (*Philippe.Pegon\_at\_crc.u-strasbg.fr*)

**Date:** 03/12/05

Date: Sat, 12 Mar 2005 11:23:28 +0100

To: current@freebsd.org

Hi,

I have a FreeBSD bi-processor box with amr device in FreeBSD 5.4-prerelease of this week.

```
# uname -a
```

```
FreeBSD sokaris2.u-strasbg.fr 5.4-PRERELEASE FreeBSD 5.4-PRERELEASE #3:
```

```
Thu Mar 10 15:33:01 CET 2005
```

```
root@crc.u-strasbg.fr:/usr/obj/usr/src/sys/SOKARIS2 i386
```

Starting a program which continuously polls the state of the raid array (amrstat, see source attached), and making a buildworld at the same time triggers a kernel panic. The problem is fairly easy to reproduce.

Features added in the SMP kernel : altq, KDB, DDB, GDB (see config file and dmesg output attached). The kernel is launched with ACPI disabled.

A stack trace of the kernel panic and the result of a remote gdb follow.

Thank you by advance for your help,

Philippe PEGON

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PANIC

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lock order reversal

1st 0xc239994c AMR IO Lock (AMR IO Lock) @ /usr/src/sys/dev/amr/amr.c:487

2nd 0xc29fdd28 user map (user map) @ /usr/src/sys/vm/vm\_map.c:2998

KDB: stack backtrace:

kdb\_backtrace(ffffffff,c08d3f20,c08d4970,c086802c,c08f7f58) at

kdb\_backtrace+0x29

witness\_checkorder(c29fdd28,9,c0821569,bb6,c08ccb60,0,c080cb81,9d) at

witness\_checkorder+0x49d

\_sx\_xlock(c29fdd28,c0821569,bb6) at \_sx\_xlock+0x2c

\_vm\_map\_lock\_read(c29fdce4,c0821569,bb6,28cc360,c2a74b04) at

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```
_vm_map_lock_read+0x37
vm_map_lookup(f157aa6c,0,2,f157aa70,f157aa60) at vm_map_lookup+0x28
vm_fault(c29fdce4,0,2,8,c2a75c80) at vm_fault+0x66
trap_pfault(f157ab34,0,0) at trap_pfault+0xd2
trap(c0600018,c0860010,10,0,c2dbd200) at trap+0x2f1
calltrap() at calltrap+0x5
---- trap 0xc, eip = 0xc04b3696, esp = 0xf157ab74, ebp = 0xf157ab74 ----
amr_releasecmd(0,c2dbd1c0,c0865180,c2ce0800,c0865180) at amr_releasecmd+0x6
amr_ioctl(c08ca0d8,c0304301,c2dbd200,1,c2a75c80) at amr_ioctl+0x2cc
spec_ioctl(f157ac08,f157acb4,c0669396,f157ac08,c08ade40) at spec_ioctl+0x11d
spec_vnoperate(f157ac08) at spec_vnoperate+0x13
vn_ioctl(c26a0dd0,c0304301,c2dbd200,c29cd280,c2a75c80) at vn_ioctl+0x1ee
ioctl(c2a75c80,f157ad14,3,1,293) at ioctl+0x344
syscall(2f,2f,2f,bfbfed00,bfbfecf8) at syscall+0x213
Xint0x80_syscall() at Xint0x80_syscall+0x1f
---- syscall (54, FreeBSD ELF32, ioctl), eip = 0x280aeea4, esp =
0xbfbfe2e4, ebp = 0xbfbfe340 ----
```

```
Fatal trap 12: page fault while in kernel mode
cpuid = 0; apic id = 01
fault virtual address = 0x0
fault code = supervisor write, page not present
instruction pointer = 0x8:0xc04b3696
stack pointer = 0x10:0xf157ab74
frame pointer = 0x10:0xf157ab74
code segment = base 0x0, limit 0xffff, type 0x1b
                = DPL 0, pres 1, def32 1, gran 1
processor eflags = interrupt enabled, resume, IOPL = 0
current process = 11725 (amrstat)
[thread pid 11725 tid 100148 ]
```

```
Stopped at amr_releasecmd+0x6: movl $0,0(%edx)
db> trace
```

```
Tracing pid 11725 tid 100148 td 0xc2a75c80
amr_releasecmd(0,c2dbd1c0,c0865180,c2ce0800,c0865180) at amr_releasecmd+0x6
amr_ioctl(c08ca0d8,c0304301,c2dbd200,1,c2a75c80) at amr_ioctl+0x2cc
spec_ioctl(f157ac08,f157acb4,c0669396,f157ac08,c08ade40) at spec_ioctl+0x11d
spec_vnoperate(f157ac08) at spec_vnoperate+0x13
vn_ioctl(c26a0dd0,c0304301,c2dbd200,c29cd280,c2a75c80) at vn_ioctl+0x1ee
ioctl(c2a75c80,f157ad14,3,1,293) at ioctl+0x344
syscall(2f,2f,2f,bfbfed00,bfbfecf8) at syscall+0x213
Xint0x80_syscall() at Xint0x80_syscall+0x1f
---- syscall (54, FreeBSD ELF32, ioctl), eip = 0x280aeea4, esp =
0xbfbfe2e4, ebp = 0xbfbfe340 ----
```

```
db> ps
```

```
pid proc uid ppid pgrp flag stat wmesg wchan cmd
11725 c2a74a98 0 493 11725 0004002 [CPU 0] amrstat
11724 c263a1c4 0 11674 2633 0004002 [SLPQ getblk 0xd633583c][SLP] make
11674 c2a06a98 0 11672 2633 0004002 [SLPQ wait 0xc2a06a98][SLP] sh
11672 c2af0388 0 8684 2633 0004002 [SLPQ select 0xc08f8064][SLP] make
8684 c2a7454c 0 8681 2633 0004002 [SLPQ wait 0xc2a7454c][SLP] sh
8681 c2af0710 0 8678 2633 0004002 [SLPQ select 0xc08f8064][SLP] make
```

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```
8678 c2a03000 0 8660 2633 0004002 [SLPQ wait 0xc2a03000][SLP] sh
8660 c2a0654c 0 2722 2633 0004002 [SLPQ select 0xc08f8064][SLP] make
2722 c2a06000 0 2675 2633 0004002 [SLPQ wait 0xc2a06000][SLP] sh
2675 c263d710 0 2672 2633 0004002 [SLPQ select 0xc08f8064][SLP] make
2672 c263da98 0 2633 2633 0004002 [SLPQ wait 0xc263da98][SLP] sh
2633 c2a03e20 0 1191 2633 0004002 [SLPQ select 0xc08f8064][SLP] make
1463 c2a03388 0 478 64 0004000 [SLPQ biord 0xd655787c][SLP]
fsock_ufs
1191 c26911c4 0 930 1191 0004002 [SLPQ wait 0xc26911c4][SLP] bash
930 c263a388 0 420 930 0000100 [SLPQ select 0xc08f8064][SLP] sshd
493 c269454c 0 490 493 0004002 [SLPQ wait 0xc269454c][SLP] bash
490 c26941c4 0 420 490 0000100 [SLPQ select 0xc08f8064][SLP] sshd
489 c263ac5c 0 1 489 0004002 [SLPQ ttyin 0xc25fce10][SLP] login
488 c263ae20 0 1 488 0004002 [SLPQ ttyin 0xc22c8810][SLP] getty
487 c238fe20 0 1 487 0004002 [SLPQ ttyin 0xc22c8a10][SLP] getty
486 c2691388 0 1 486 0004002 [SLPQ ttyin 0xc22c8c10][SLP] getty
485 c28af54c 0 1 485 0004002 [SLPQ ttyin 0xc22c8e10][SLP] getty
484 c26948d4 0 1 484 0004002 [SLPQ ttyin 0xc23f5010][SLP] getty
483 c2694000 0 1 483 0004002 [SLPQ ttyin 0xc23f5210][SLP] getty
482 c28afc5c 0 1 482 0004002 [SLPQ ttyin 0xc23f5410][SLP] getty
481 c263d54c 0 1 481 0004002 [SLPQ ttyin 0xc22c7810][SLP] getty
478 c263d8d4 0 476 64 0004002 [SLPQ wait 0xc263d8d4][SLP] fsck
477 c2691000 0 1 64 0004002 [SLPQ piperd 0xc26a5000][SLP]
logger
476 c2694388 0 1 64 0000002 [SLPQ wait 0xc2694388][SLP] sh
469 c263dc5c 0 1 469 0000000 [SLPQ select 0xc08f8064][SLP] inetd
442 c28af8d4 0 1 442 0000000 [SLPQ nanslp 0xc08cde4c][SLP] cron
430 c28afa98 25 1 430 0000100 [SLPQ pause 0xc28afad0][SLP]
sendmail
426 c28af388 0 1 426 0000100 [SLPQ select 0xc08f8064][SLP]
sendmail
420 c2694710 0 1 420 0000100 [SLPQ select 0xc08f8064][SLP] sshd
394 c28af710 0 1 394 0000000 [SLPQ select 0xc08f8064][SLP] lpd
293 c263a54c 0 1 293 0000000 [SLPQ select 0xc08f8064][SLP]
syslogd
273 c2691e20 0 1 273 0000000 [SLPQ select 0xc08f8064][SLP] devd
243 c2691710 0 1 243 0000000 [SLPQ select 0xc08f8064][SLP]
dhclient
192 c26918d4 0 1 192 0000000 [SLPQ pause 0xc269190c][SLP]
adjkerntz
63 c263d000 0 0 0 0000204 [SLPQ - 0xef24dd04][SLP] schedcpu
62 c263d1c4 0 0 0 0000204 [SLPQ - 0xc08ffa8c][SLP] nfsiod 3
61 c263d388 0 0 0 0000204 [SLPQ - 0xc08ffa88][SLP] nfsiod 2
60 c22f71c4 0 0 0 0000204 [SLPQ - 0xc08ffa84][SLP] nfsiod 1
59 c22f7388 0 0 0 0000204 [SLPQ - 0xc08ffa80][SLP] nfsiod 0
58 c22f754c 0 0 0 0000204 [SLPQ biord 0xd658067c][SLP] syncer
57 c22f7710 0 0 0 0000204 [SLPQ vlruwt 0xc22f7710][SLP] vnru
56 c22f78d4 0 0 0 0000204 [SLPQ wdrain 0xc08f8664][SLP]
bufdaemon
55 c22f7a98 0 0 0 000020c [SLPQ pgzero 0xc09063f4][SLP]
pagezero
```

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9 c22f7c5c 0 0 0 0000204 [SLPQ psleep 0xc0906448][SLP]  
vmdaemon  
8 c22f7e20 0 0 0 0000204 [SLPQ psleep 0xc0906404][SLP]  
pagedaemon  
54 c238f000 0 0 0 0000204 [IWAIT] swi0: sio  
7 c238f1c4 0 0 0 0000204 [SLPQ - 0xc239f53c][SLP] fdc0  
6 c238f388 0 0 0 0000204 [SLPQ - 0xc2385240][SLP] kqueue  
taskq  
53 c238f54c 0 0 0 0000204 [IWAIT] swi3: cambio  
52 c238f710 0 0 0 0000204 [IWAIT] swi2: camnet  
51 c238f8d4 0 0 0 0000204 [IWAIT] swi6:+  
5 c22dea98 0 0 0 0000204 [SLPQ - 0xc2385480][SLP] thread  
taskq  
50 c22dec5c 0 0 0 0000204 [IWAIT] swi6:+  
49 c22dee20 0 0 0 0000204 [IWAIT] swi6: task queue  
48 c22f2000 0 0 0 0000204 [SLPQ - 0xc08c3800][SLP]yarrow  
4 c22f21c4 0 0 0 0000204 [SLPQ - 0xc08c84a8][SLP] g\_down  
3 c22f2388 0 0 0 0000204 [CPU 1] g\_up  
2 c22f254c 0 0 0 0000204 [SLPQ - 0xc08c849c][SLP] g\_event  
47 c22f2710 0 0 0 0000204 [IWAIT] swi4: vm  
46 c22f28d4 0 0 0 000020c [RUNQ] swi5: clock sio  
45 c22f2a98 0 0 0 0000204 [IWAIT] swi1: net  
44 c22f2c5c 0 0 0 0000204 [IWAIT] irq0: clk  
43 c22f2e20 0 0 0 0000204 [IWAIT] irq31:  
42 c22f7000 0 0 0 0000204 [IWAIT] irq30:  
41 c22ce54c 0 0 0 0000204 [IWAIT] irq29:  
40 c22ce710 0 0 0 0000204 [IWAIT] irq28:  
39 c22ce8d4 0 0 0 0000204 [IWAIT] irq27:  
38 c22cea98 0 0 0 0000204 [IWAIT] irq26:  
37 c22cec5c 0 0 0 0000204 [IWAIT] irq25:  
36 c22cee20 0 0 0 0000204 [RUNQ] irq24: em0  
35 c22de000 0 0 0 0000204 [IWAIT] irq23: bge0  
34 c22de1c4 0 0 0 0000204 [IWAIT] irq22: amr1  
33 c22de388 0 0 0 0000204 [IWAIT] irq21:  
32 c22de54c 0 0 0 0000204 [RUNQ] irq20: amr0  
31 c22de710 0 0 0 0000204 [IWAIT] irq19:  
30 c22de8d4 0 0 0 0000204 [IWAIT] irq18:  
29 c228c1c4 0 0 0 0000204 [IWAIT] irq17:  
28 c228c388 0 0 0 0000204 [IWAIT] irq16:  
27 c228c54c 0 0 0 0000204 [IWAIT] irq15: ata1  
26 c228c710 0 0 0 0000204 [IWAIT] irq14: ata0  
25 c228c8d4 0 0 0 0000204 [IWAIT] irq13:  
24 c228ca98 0 0 0 0000204 [IWAIT] irq12: psm0  
23 c228cc5c 0 0 0 0000204 [IWAIT] irq11:  
22 c228ce20 0 0 0 0000204 [IWAIT] irq10:  
21 c22ce000 0 0 0 0000204 [IWAIT] irq9:  
20 c22ce1c4 0 0 0 0000204 [IWAIT] irq8: rtc  
19 c22ce388 0 0 0 0000204 [IWAIT] irq7:  
18 c2283000 0 0 0 0000204 [IWAIT] irq6: fdc0  
17 c22831c4 0 0 0 0000204 [IWAIT] irq5:  
16 c2283388 0 0 0 0000204 [IWAIT] irq4: sio0

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```
15 c228354c 0 0 0 0000204 [IWAIT] irq3:
14 c2283710 0 0 0 0000204 [IWAIT] irq2:
13 c22838d4 0 0 0 0000204 [IWAIT] irq1: atkbd0
12 c2283a98 0 0 0 000020c [Can run] idle: cpu0
11 c2283c5c 0 0 0 000020c [Can run] idle: cpu1
 1 c2283e20 0 0 1 0004200 [SLPQ wait 0xc2283e20][SLP] init
10 c228c000 0 0 0 0000204 [SLPQ ktrace 0xc08cbdf8][SLP]
ktrace
 0 c08c85a0 0 0 0 0000200 [SLPQ sched 0xc08c85a0][SLP]
swapper
db> thread
[thread pid 11725 tid 100148 ]
amr_releasecmd+0x6: movl $0,0(%edx)
```

---

## REMOTE GDB

---

```
$ kgdb -r /dev/cuaa0 kernel.debug
[GDB will not be able to debug user-mode threads:
/usr/lib/libthread_db.so: Undefined symbol "ps_pglobal_lookup"]
GNU gdb 6.1.1 [FreeBSD]
Copyright 2004 Free Software Foundation, Inc.
GDB is free software, covered by the GNU General Public License, and you are
welcome to change it and/or distribute copies of it under certain
conditions.
Type "show copying" to see the conditions.
There is absolutely no warranty for GDB. Type "show warranty" for details.
This GDB was configured as "i386-marcel-freebsd".
Ready to go. Enter 'tr' to connect to the remote target
with /dev/cuaa0, 'tr /dev/cuaa1' to connect to a different port
or 'trf portno' to connect to the remote target with the firewire
interface. portno defaults to 5556.
```

Type 'getsyms' after connection to load kld symbols.

If you're debugging a local system, you can use 'kldsyms' instead to load the kld symbols. That's a less obnoxious interface.

```
Switching to remote protocol
amr_releasecmd (ac=0x0) at amrvar.h:361
361 TAILQ_INSERT_TAIL(&ac->ac_sc->amr_freecmds, ac, ac_link);
amr_releasecmd (ac=0x0) at amrvar.h:361
(kgdb) where
#0 amr_releasecmd (ac=0x0) at amrvar.h:361
During symbol reading, Incomplete CFI data; unspecified registers at
0xc04b3693.
#1 0xc04b24f0 in amr_ioctl (dev=0x1, cmd=0x0, addr=0xc262b780 ";\\016",
flag=0x1, td=0xc2310320)
  at /usr/src/sys/dev/amr/amr.c:568
#2 0xc05dfb0d in spec_ioctl (ap=0xe4e3ac08) at
/usr/src/sys/fs/specfs/spec_vnops.c:357
```

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```
#3 0xc05df317 in spec_vnoperate (ap=0x0) at
/usr/src/sys/fs/specfs/spec_vnops.c:118
#4 0xc0669396 in vn_ioctl (fp=0xc26a11dc, com=0xc0304301,
data=0xc262b780, active_cred=0xc29bd000, td=0xc2310320)
  at vnode_if.h:503
#5 0xc0632934 in ioctl (td=0xc2310320, uap=0xe4e3ad14) at file.h:257
#6 0xc07a48e3 in syscall (frame=
  {tf_fs = 0x2f, tf_es = 0x2f, tf_ds = 0x2f, tf_edi = 0xbfbfed00,
tf_esi = 0xbfbfecf8, tf_ebp = 0xbfbfe340, tf_isp = 0xe4e3ad74, tf_ebx =
0x1, tf_edx = 0xe, tf_ecx = 0x0, tf_eax = 0x36, tf_trapno = 0xc, tf_err =
0x2, tf_eip = 0x280aeea4, tf_cs = 0x1f, tf_eflags = 0x293, tf_esp =
0xbfbfe2e4, tf_ss = 0x2f}) at /usr/src/sys/i386/i386/trap.c:1001
#7 0xc079397f in Xint0x80_syscall () at
/usr/src/sys/i386/i386/exception.s:201
#8 0x0000002f in ?? ()
#9 0x0000002f in ?? ()
#10 0x0000002f in ?? ()
#11 0xbfbfed00 in ?? ()
#12 0xbfbfecf8 in ?? ()
#13 0xbfbfe340 in ?? ()
#14 0xe4e3ad74 in ?? ()
#15 0x00000001 in ?? ()
#16 0x0000000e in ?? ()
#17 0x00000000 in ?? ()
#18 0x00000036 in ?? ()
#19 0x0000000c in ?? ()
#20 0x00000002 in ?? ()
#21 0x280aeea4 in ?? ()
#22 0x0000001f in ?? ()
#23 0x00000293 in ?? ()
#24 0xbfbfe2e4 in ?? ()
#25 0x0000002f in ?? ()
#26 0x00000000 in ?? ()
#27 0x00000000 in ?? ()
#28 0x00000000 in ?? ()
#29 0x00000000 in ?? ()
#30 0x1df9c000 in ?? ()
#31 0xc23a4e20 in ?? ()
#32 0xc2310320 in ?? ()
#33 0xe4e3ac98 in ?? ()
#34 0xe4e3ac80 in ?? ()
#35 0xc230b640 in ?? ()
#36 0xc0622003 in sched_switch (td=0xbfbfecf8, newtd=0x1,
flags=0xbfbfe44c) at /usr/src/sys/kern/sched_4bsd.c:881
Previous frame inner to this frame (corrupt stack?)
(kgdb) list *0xc04b3696
0xc04b3696 is in amr_releasecmd (amrvar.h:361).
356 amr_enqueue_free(struct amr_command *ac)
357 {
358 int s;
359
```

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```
360 s = splbio();
361 TAILQ_INSERT_TAIL(&ac->ac_sc->amr_freecmds, ac, ac_link);
362 splx(s);
363 }
364
365 static __inline struct amr_command *
(kgdb) list *0xc04b24f0
0xc04b24f0 is in amr_ioctl (/usr/src/sys/dev/amr/amr.c:569).
564 * objects have been allocated.
565 */
566 free(dp, M_DEVBUF);
567 free(ap, M_DEVBUF);
568 amr_releasecmd(ac);
569 mtx_unlock(&sc->amr_io_lock);
570 return(error);
571 }
572
573
/*****
(kgdb) quit

#
# SOKARIS2
#

machine i386
cpu I686_CPU
ident SOKARIS2

# To statically compile in device wiring instead of /boot/device.hints
#hints "GENERIC.hints" # Default places to look for devices.

options SCHED_4BSD # 4BSD scheduler
options INET # InterNETworking
options INET6 # IPv6 communications protocols
options FFS # Berkeley Fast Filesystem
options SOFTUPDATES # Enable FFS soft updates support
options UFS_ACL # Support for access control lists
options UFS_DIRHASH # Improve performance on big directories
options MD_ROOT # MD is a potential root device
options NFSCLIENT # Network Filesystem Client
options NFSSERVER # Network Filesystem Server
options NFS_ROOT # NFS usable as /, requires NFSCLIENT
options MSDOSFS # MSDOS Filesystem
options CD9660 # ISO 9660 Filesystem
options PROCFS # Process filesystem (requires PSEUDOFS)
options PSEUDOFS # Pseudo-filesystem framework
options GEOM_GPT # GUID Partition Tables.
```

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```
options COMPAT_43 # Compatible with BSD 4.3 [KEEP THIS!]
options COMPAT_FREEBSD4 # Compatible with FreeBSD4
options SCSI_DELAY=15000 # Delay (in ms) before probing SCSI
options KTRACE # ktrace(1) support
options SYSVSHM # SYSV-style shared memory
options SYSVMSG # SYSV-style message queues
options SYSVSEM # SYSV-style semaphores
options _KPOSIX_PRIORITY_SCHEDULING # POSIX P1003_1B real-time extensions
options KBD_INSTALL_CDEV # install a CDEV entry in /dev
options AHC_REG_PRETTY_PRINT # Print register bitfields in debug
                        # output. Adds ~128k to driver.
options AHD_REG_PRETTY_PRINT # Print register bitfields in debug
                        # output. Adds ~215k to driver.
options ADAPTIVE_GIANT # Giant mutex is adaptive.
```

```
options SMP # Symmetric MultiProcessor Kernel
device apic # I/O APIC
```

```
# Bus support. Do not remove isa, even if you have no isa slots
device isa
device eisa
device pci
```

```
# Floppy drives
device fdc
```

```
# ATA and ATAPI devices
device ata
device atadisk # ATA disk drives
device ataraid # ATA RAID drives
device atapicd # ATAPI CDROM drives
device atapifd # ATAPI floppy drives
device atapist # ATAPI tape drives
options ATA_STATIC_ID # Static device numbering
```

```
# SCSI Controllers
device ahb # EISA AHA1742 family
device ahc # AHA2940 and onboard AIC7xxx devices
device ahd # AHA39320/29320 and onboard AIC79xx devices
device amd # AMD 53C974 (Tekram DC-390(T))
device isp # Qlogic family
device mpt # LSI-Logic MPT-Fusion
#device ncr # NCR/Symbios Logic
device sym # NCR/Symbios Logic (newer chipsets + those of `ncr')
device trm # Tekram DC395U/UW/F DC315U adapters
```

```
device adv # Advansys SCSI adapters
device adw # Advansys wide SCSI adapters
device aha # Adaptec 154x SCSI adapters
device aic # Adaptec 15[012]x SCSI adapters, AIC-6[23]60.
device bt # Buslogic/Mylex MultiMaster SCSI adapters
```

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```
device ncv # NCR 53C500
device nsp # Workbit Ninja SCSI-3
device stg # TMC 18C30/18C50

# SCSI peripherals
device scbus # SCSI bus (required for SCSI)
device ch # SCSI media changers
device da # Direct Access (disks)
device sa # Sequential Access (tape etc)
device cd # CD
device pass # Passthrough device (direct SCSI access)
device ses # SCSI Environmental Services (and SAF-TE)

# RAID controllers interfaced to the SCSI subsystem
device amr # AMI MegaRAID
device asr # DPT SmartRAID V, VI and Adaptec SCSI RAID
device ciss # Compaq Smart RAID 5*
device dpt # DPT Smartcache III, IV - See NOTES for options
device hptmv # Highpoint RocketRAID 182x
device iir # Intel Integrated RAID
device ips # IBM (Adaptec) ServeRAID
device mly # Mylex AcceleRAID/eXtremeRAID
device twa # 3ware 9000 series PATA/SATA RAID

# RAID controllers
device aac # Adaptec FSA RAID
device aacp # SCSI passthrough for aac (requires CAM)
device ida # Compaq Smart RAID
device mlx # Mylex DAC960 family
device pst # Promise Supertrak SX6000
device twe # 3ware ATA RAID

# atkbd0 controls both the keyboard and the PS/2 mouse
device atkbd # AT keyboard controller
device atkbd # AT keyboard
device psm # PS/2 mouse

device vga # VGA video card driver

device splash # Splash screen and screen saver support

# syscons is the default console driver, resembling an SCO console
device sc

# Enable this for the pcvt (VT220 compatible) console driver
#device vt
#options XSERVER # support for X server on a vt console
#options FAT_CURSOR # start with block cursor

device agp # support several AGP chipsets
```

```
# Floating point support – do not disable.
device npx

# Power management support (see NOTES for more options)
#device apm
# Add suspend/resume support for the i8254.
device pmtimer

# PCCARD (PCMCIA) support
# PCMCIA and cardbus bridge support
device cbb # cardbus (yenta) bridge
device pccard # PC Card (16-bit) bus
device cardbus # CardBus (32-bit) bus

# Serial (COM) ports
device sio # 8250, 16[45]50 based serial ports

# Parallel port
device ppc
device ppbus # Parallel port bus (required)
device lpt # Printer
device plip # TCP/IP over parallel
device ppi # Parallel port interface device
#device vpo # Requires scbus and da

# If you've got a "dumb" serial or parallel PCI card that is
# supported by the puc(4) glue driver, uncomment the following
# line to enable it (connects to the sio and/or ppc drivers):
#device puc

# PCI Ethernet NICs.
device de # DEC/Intel DC21x4x (`Tulip")
device em # Intel PRO/1000 adapter Gigabit Ethernet Card
device ixgb # Intel PRO/10GbE Ethernet Card
device txp # 3Com 3cR990 (`Typhoon")
device vx # 3Com 3c590, 3c595 (`Vortex")

# PCI Ethernet NICs that use the common MII bus controller code.
# NOTE: Be sure to keep the 'device miibus' line in order to use these NICs!
device miibus # MII bus support
device bfe # Broadcom BCM440x 10/100 Ethernet
device bge # Broadcom BCM570xx Gigabit Ethernet
device dc # DEC/Intel 21143 and various workalikes
device fxp # Intel EtherExpress PRO/100B (82557, 82558)
device lge # Level 1 LXT1001 gigabit ethernet
device nge # NatSemi DP83820 gigabit ethernet
device pcn # AMD Am79C97x PCI 10/100 (precedence over 'Inc')
device re # RealTek 8139C+/8169/8169S/8110S
device rl # RealTek 8129/8139
device sf # Adaptec AIC-6915 (`Starfire")
device sis # Silicon Integrated Systems SiS 900/SiS 7016
```

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```
device sk # SysKonnnect SK-984x & SK-982x gigabit Ethernet
device ste # Sundance ST201 (D-Link DFE-550TX)
device ti # Alteon Networks Tigon I/II gigabit Ethernet
device tl # Texas Instruments ThunderLAN
device tx # SMC EtherPower II (83c170 ``EPIC")
device vge # VIA VT612x gigabit ethernet
device vr # VIA Rhine, Rhine II
device wb # Winbond W89C840F
device xl # 3Com 3c90x (``Boomerang", ``Cyclone")
```

```
# ISA Ethernet NICs. pccard NICs included.
device cs # Crystal Semiconductor CS89x0 NIC
# 'device ed' requires 'device miibus'
device ed # NE[12]000, SMC Ultra, 3c503, DS8390 cards
device ex # Intel EtherExpress Pro/10 and Pro/10+
device ep # Etherlink III based cards
device fe # Fujitsu MB8696x based cards
device ie # EtherExpress 8/16, 3C507, StarLAN 10 etc.
device inc # NE2100, NE32-VL Lance Ethernet cards
device sn # SMC's 9000 series of Ethernet chips
device xe # Xircom pccard Ethernet
```

```
# ISA devices that use the old ISA shims
#device le
```

```
# Wireless NIC cards
device wlan # 802.11 support
device an # Aironet 4500/4800 802.11 wireless NICs.
device awi # BayStack 660 and others
device wi # WaveLAN/Intersil/Symbol 802.11 wireless NICs.
#device wl # Older non 802.11 Wavelan wireless NIC.
```

```
# Pseudo devices.
device loop # Network loopback
device mem # Memory and kernel memory devices
device io # I/O device
device random # Entropy device
device ether # Ethernet support
device sl # Kernel SLIP
device ppp # Kernel PPP
device tun # Packet tunnel.
device pty # Pseudo-ttys (telnet etc)
device md # Memory "disks"
device gif # IPv6 and IPv4 tunneling
device faith # IPv6-to-IPv4 relaying (translation)
```

```
# The `bpf' device enables the Berkeley Packet Filter.
# Be aware of the administrative consequences of enabling this!
device bpf # Berkeley packet filter
```

```
# USB support
device uhci # UHCI PCI->USB interface
device ohci # OHCI PCI->USB interface
device usb # USB Bus (required)
#device udbp # USB Double Bulk Pipe devices
device ugen # Generic
device uhid # "Human Interface Devices"
device ukbd # Keyboard
device ulpt # Printer
device umass # Disks/Mass storage - Requires scbus and da
device ums # Mouse
device urio # Diamond Rio 500 MP3 player
device uscanner # Scanners
# USB Ethernet, requires mii
device aue # ADMtek USB Ethernet
device axe # ASIX Electronics USB Ethernet
device cue # CATC USB Ethernet
device kue # Kawasaki LSI USB Ethernet
device rue # RealTek RTL8150 USB Ethernet

# FireWire support
device firewire # FireWire bus code
device sbp # SCSI over FireWire (Requires scbus and da)
device fwe # Ethernet over FireWire (non-standard!)

# altq(9). Enable the base part of the hooks with the ALTQ option.
# Individual disciplines must be built into the base system and can not be
# loaded as modules at this point. In order to build a SMP kernel you must
# also have the ALTQ_NOPCC option.
options ALTQ
options ALTQ_CBQ # Class Bases Queueing
options ALTQ_RED # Random Early Drop
options ALTQ_RIO # RED In/Out
options ALTQ_HFSC # Hierarchical Packet Scheduler
options ALTQ_CDNR # Traffic conditioner
options ALTQ_PRIQ # Priority Queueing
options ALTQ_NOPCC # Required for SMP build

# The following options will let you change the default colors of syscons.
options SC_KERNEL_CONS_ATTR="(FG_RED|BG_BLACK)"
options SC_KERNEL_CONS_REV_ATTR="(FG_BLACK|BG_RED)"

# debug
makeoptions DEBUG=-g #Build kernel with gdb(1) debug symbols
options KDB
options DDB
options GDB
options WITNESS
```

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FreeBSD 5.4-PRERELEASE #3: Thu Mar 10 15:33:01 CET 2005

root@crc.u-strasbg.fr:/usr/obj/usr/src/sys/SOKARIS2

WARNING: WITNESS option enabled, expect reduced performance.

Timecounter "i8254" frequency 1193182 Hz quality 0

CPU: Intel Pentium III (999.53-MHz 686-class CPU)

Origin = "GenuineIntel" Id = 0x686 Stepping = 6

Features=0x387fbff<FPU,VME,DE,PSE,TSC,MSR,PAE,MCE,CX8,APIC,SEP,MTRR,PGE,MCA,CMOV,PAT,PSE

real memory = 1073676288 (1023 MB)

avail memory = 1041129472 (992 MB)

MPTable: <HP LH 3000 U3 >

FreeBSD/SMP: Multiprocessor System Detected: 2 CPUs

cpu0 (BSP): APIC ID: 1

cpu1 (AP): APIC ID: 0

ioapic0: Assuming intbase of 0

ioapic1: Assuming intbase of 16

ioapic0 <Version 1.1> irqs 0-15 on motherboard

ioapic1 <Version 1.1> irqs 16-31 on motherboard

npx0: <math processor> on motherboard

npx0: INT 16 interface

cpu0 on motherboard

cpu1 on motherboard

pcib0: <MPTable Host-PCI bridge> pcibus 0 on motherboard

pci0: <PCI bus> on pcib0

pcib1: <MPTable PCI-PCI bridge> at device 3.0 on pci0

pci1: <PCI bus> on pcib1

pcib2: <MPTable PCI-PCI bridge> at device 0.0 on pci1

pci2: <PCI bus> on pcib2

amr0: <LSILogic MegaRAID 1.51> mem 0xf0000000-0xf7ffffff irq 20 at device 0.0 on pci2

amr0: <LSILogic HP NetRAID-2M> Firmware \^H\^AH , BIOS \^B\^AG , 128MB RAM

pci1: <mass storage, SCSI> at device 1.0 (no driver attached)

pci0: <display, VGA> at device 7.0 (no driver attached)

isab0: <PCI-ISA bridge> port 0x1040-0x104f at device 15.0 on pci0

isa0: <ISA bus> on isab0

atapci0: <ServerWorks ROSB4 UDMA33 controller> port

0x1800-0x180f,0x376,0x170-0x177,0x3f6,0x1f0-0x1f7 at device 15.1 on pci0

ata0: channel #0 on atapci0

ata1: channel #1 on atapci0

pcib3: <MPTable Host-PCI bridge> pcibus 3 on motherboard

pci3: <PCI bus> on pcib3

pci3: <base peripheral> at device 2.0 (no driver attached)

pci3: <serial bus> at device 2.1 (no driver attached)

pcib4: <PCI-PCI bridge> at device 3.0 on pci3

pci4: <PCI bus> on pcib4

pci4: <base peripheral> at device 8.0 (no driver attached)

amr1: <LSILogic MegaRAID 1.51> mem 0xfa000000-0xfbffffff irq 22 at device 3.1 on pci3

amr1: <Integrated HP NetRAID (T7)> Firmware E.01.08, BIOS B.02.03, 32MB RAM

bge0: <Broadcom BCM5700 Gigabit Ethernet, ASIC rev. 0x7102> mem 0xf8800000-0xf880ffff irq 23 at device 5.0 on pci3

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miibus0: <MII bus> on bge0  
brgphy0: <BCM5401 10/100/1000baseTX PHY> on miibus0  
brgphy0: 10baseT, 10baseT-FDX, 100baseTX, 100baseTX-FDX, 1000baseTX, 1000baseTX-FDX, auto  
bge0: Ethernet address: 00:04:76:3b:2f:18  
em0: <Intel(R) PRO/1000 Network Connection, Version - 1.7.35> port 0x4800-0x481f mem  
0xf8820000-0xf883ffff,0xf8840000-0xf885ffff irq 24 at device 6.0 on pci3  
em0: Ethernet address: 00:02:b3:98:e0:8a  
em0: Speed:N/A Duplex:N/A  
orm0: <ISA Option ROM> at iomem 0xc0000-0xc7fff on isa0  
pmtimer0 on isa0  
atkbd0: <Keyboard controller (i8042)> at port 0x64,0x60 on isa0  
atkbd0: <AT Keyboard> irq 1 on atkbd0  
kbd0 at atkbd0  
psm0: <PS/2 Mouse> irq 12 on atkbd0  
psm0: model IntelliMouse, device ID 3  
fdc0: <Enhanced floppy controller> at port 0x3f0-0x3f5 irq 6 drq 2 on isa0  
fd0: <1440-KB 3.5" drive> on fdc0 drive 0  
ppc0: parallel port not found.  
sc0: <System console> at flags 0x100 on isa0  
sc0: VGA <16 virtual consoles, flags=0x300>  
sio0 at port 0x3f8-0x3ff irq 4 flags 0x80 on isa0  
sio0: type 16550A  
sio1: configured irq 3 not in bitmap of probed irqs 0  
sio1: port may not be enabled  
vga0: <Generic ISA VGA> at port 0x3c0-0x3df iomem 0xa0000-0xbffff on isa0  
unknown: <PNP0303> can't assign resources (port)  
unknown: <PNP0c02> can't assign resources (port)  
unknown: <PNP0501> can't assign resources (port)  
unknown: <PNP0f13> can't assign resources (irq)  
unknown: <PNP0700> can't assign resources (port)  
Timecounters tick every 10.000 msec  
acd0: CDROM <LTN486S/YKS4> at ata0-master PIO4  
amrd0: <LSILogic MegaRAID logical drive> on amr0  
amrd0: 17365MB (35563520 sectors) RAID 1 (degraded)  
amrd1: <LSILogic MegaRAID logical drive> on amr0  
amrd1: 312579MB (640161792 sectors) RAID 5 (optimal)  
ses0 at amr0 bus 0 target 5 lun 0  
ses0: <HP SAFTE; U160/M BP 1023> Fixed Processor SCSI-2 device  
ses0: SAF-TE Compliant Device  
ses1 at amr0 bus 1 target 5 lun 0  
ses1: <HP SAFTE; U160/M BP 1023> Fixed Processor SCSI-2 device  
ses1: SAF-TE Compliant Device  
SMP: AP CPU #1 Launched!  
Mounting root from ufs:/dev/amrd0s1a  
WARNING: / was not properly dismounted  
WARNING: /local was not properly dismounted  
WARNING: /local/services was not properly dismounted  
WARNING: /tmp was not properly dismounted  
/tmp: mount pending error: blocks 4 files 1  
WARNING: /usr was not properly dismounted  
WARNING: /var was not properly dismounted

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em0: Link is up 1000 Mbps Full Duplex

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freebsd-current@freebsd.org mailing list

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To unsubscribe, send any mail to "freebsd-current-unsubscribe@freebsd.org"