

[SOLVED] Re: i386 kernel just stops booting

Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/current/2007-02/msg00605.html>

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 - *Date:* Wed, 28 Feb 2007 17:46:08 +0100
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Karol Kwiatkowski wrote:

Hello everyone,

I'm trying to get CURRENT installed on i386 desktop machine, but kernel stops booting after some time [1]. No error, even with verbose logging. At that point keyboard does not respond so manual reset is the only option. Nothing is logged into dmesg or messages.

[1]

[...]

```
found-> vendor=0x1102, dev=0x4001, revid=0x00
bus=2, slot=8, func=2
class=0c-00-10, hdrtype=0x00, mfdev=1
cmdreg=0x0116, statreg=0x0210, cachelsz=64 (dwords)
lattimer=0x20 (960 ns), mingnt=0x02 (500 ns), maxlat=0x04 (1000 ns)
intpin=b, irq=5
powerspec 2 supports D0 D1 D2 D3 current D0
map[10]: type 1, range 32, base ff5ff800, size 11, enabled
pcib1: requested memory range 0xff5ff800-0xff5ffff: good
map[14]: type 1, range 32, base ff5f8000, size 14, enabled
pcib1: requested memory range 0xff5f8000-0xff5fbfff: good
pcib1: matched entry for 2.8.INTB (src \_SB_.LNKB:0)
pci_link1: Picked IRQ 17 with weight 0
ioapic0: Changing polarity for pin 17 to high
pcib1: slot 8 INTB routed to irq 17 via \_SB_.LNKB
[ here it stops responding ]
```

Gee, after few hours of looking at the sources (yeah, kernel internals newbie here :) I've found that VPD scanning is the problem. Workaround to this is to disable VPD reading by `hw.pci.enable_vpd=0`.

Now that I know of it, I've found it is documented in a comment for revision 1.339:

<http://www.freebsd.org/cgi/cvsweb.cgi/src/sys/dev/pci/pci.c>

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FYI, it's this code in sys/dev/pci/pci.c (rev. 1.343):

```
% static void
% pci_read_extcap(device_t pcib, pcicfgregs *cfg)
[...]
% case PCIY_VPD: /* PCI Vital Product Data */
% if (pci_do_vpd) {
%   cfg->vpd.vpd_reg = ptr;
%   pci_read_vpd(pcib, cfg);
% }
% break;
```

Apparently this hangs while scanning PV-BT878P+ TV card (pci2:10:0) [1].

Cheers,

Karol

[1] PixelView PlayTV Pro PV-BT878P+ rev.9D

```
# pciconf -v1
bctr0@pci2:10:0: class=0x040000 card=0x00000000 chip=0x036e109e
rev=0x11 hdr=0x00
vendor = 'Conexant (Was: Brooktree Corp)'
device = 'Bt878/Fusion 878A Mediastream Controller'
class = multimedia
subclass = video
none7@pci2:10:1: class=0x048000 card=0x00000000 chip=0x0878109e
rev=0x11 hdr=0x00
vendor = 'Conexant (Was: Brooktree Corp)'
device = 'Bt878/Fusion878A Video Capture (Audio Section)'
class = multimedia
```

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