

RE: freebsd-hackers Digest, Vol 200, Issue 7

Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/hackers/2007-01/msg00358.html>

- *From:* "Hugo Alfredo Cano Bravo" <bckno@xxxxxxxxxxxx>
 - *Date:* Mon, 29 Jan 2007 00:17:39 +0000
-

I want to be a member.

What can I do.?

From: freebsd-hackers-request@xxxxxxxxxxxx
Reply-To: freebsd-hackers@xxxxxxxxxxxx
To: freebsd-hackers@xxxxxxxxxxxx
Subject: freebsd-hackers Digest, Vol 200, Issue 7
Date: Sun, 28 Jan 2007 12:00:39 +0000 (UTC)

Send freebsd-hackers mailing list submissions to
freebsd-hackers@xxxxxxxxxxxx

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You can reach the person managing the list at
freebsd-hackers-owner@xxxxxxxxxxxx

When replying, please edit your Subject line so it is more specific
than "Re: Contents of freebsd-hackers digest..."

Today's Topics:

1. Re: Updated Driver for 3945ABG Intel 3945ABG Wireless LAN controller (Gilbert Cao)
2. Review request: new OMNIKEY CardMan 4040 driver (Daniel Roethlisberger)
3. sysctl(3) interface (Daniel Rudy)
4. how to determine if we are building lib32 in Makefile? (Rong-en Fan)

RE: freebsd-hackers Digest, Vol 200, Issue 7

5. Re: Updated Driver for 3945ABG Intel 3945ABG Wireless LAN controller (Sam Fourman Jr.)
6. Re: atacontrol kernel crash (atausb?) (M. Warner Losh)
7. Re: unique hardware identification (Daniel Rudy)

Message: 1

Date: Sat, 27 Jan 2007 11:19:00 +0100

From: Gilbert Cao <hika@xxxxxxxxxx>

Subject: Re: Updated Driver for 3945ABG Intel 3945ABG Wireless LAN controller

To: Benjamin Close <Benjamin.Close@xxxxxxxxxxxxxxxx>

Cc: Massimo Lusetti <mlusetti@xxxxxxxx>, Florent Thoumie

<flz@xxxxxxxx>, freebsd-hackers@xxxxxxxx, freebsd-drivers@xxxxxxxx, Attilio Rao <attilio@xxxxxxxx>, damien.bergamini@xxxxxxx, sam@xxxxxxxx, gabor@xxxxxxxx, Max Laier <max@xxxxxxxx>

<max@xxxxxxxx>, Message-ID: <20070127101900.GB1099@xxxxxxxx>

Content-Type: text/plain; charset="us-ascii"

On Fri, Jan 26, 2007 at 11:09:51PM +1030, Benjamin Close wrote:

> Hi Gilbert,

> Thanks for the custom version. I've integrated the changes into the

> driver I'm working on.

> For those wanting to test out the driver which is now fully up to date

> with all change from NetBSD & OpenBSD – and has a few minor improvements

> over them, grab it from:

>

> <http://www.clearchain.com/~benjsc/download/>

>

> File is: 20070125-wpi-freebsd.tar.gz

>

> Full instructions on how to build / install the driver are in the README

> in the tar file.

>

> This should work both under -current and 6.2-Stable now.

>

> Info about the driver and what's working/broken can be found at:

>

> <http://www.clearchain.com/wiki/wpi>

>

> Cheers,

> Benjamin

I have tried the new 20070125 version.

However, I did not manage to make work. At least, it compiles.

I have installed, both wpi_fw.ko and the if_wpi.ko, as the README said.

wpi_fw.ko lies in /boot/modules and if_wpi.ko in /boot/kernel.

RE: freebsd-hackers Digest, Vol 200, Issue 7

When, I "kldload if_wpi", here is a small sample of /var/log/messages

```
Jan 27 10:30:39 vaio kernel: wpi0: <Intel(R) PRO/Wireless 3945ABG> mem
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```

In kldstat, both modules are loaded.

Then, I have "kldunload if_wpi" (and if_wpi seems to be reload, automatically, I don't know why). Same problem, it seems that wpi_fw could not be load (found ?).

As a result, no AP is "associated".

After a fresh reboot, I have reinstall the custom 20070121 version of mine, and all returns OK.

Another strange thing: when "kldload if_wpi" with 20070121 version, and then kldstat, I don't see "wpi_ucose". It seems that wpi_ucose.ko does not need to be loaded, in my case.

My wpi_ucose.ko lies in /boot/modules

After another fresh reboot, I first moved wpi_ucose.ko to another place.

When I "kldload if_wpi", I got the following message:

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36Mbps 48Mbps 54Mbps
Jan 27 09:47:16 vaio kernel: wpi0: 11b rates: 1Mbps 2Mbps 5.5Mbps 11Mbps
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```

So, it seems that wpi_ucose.ko have to lied in my /boot/modules (the place where I have also put if_wpi 20070121 version), even if it is not

loaded.

--

(hika) Gilbert Cao
<http://www.miaouirc.com>
- MiaouIRC Project 2002-2003
<http://www.bsdmon.com>
- The BSD DMON Power to serve
IRC : #miaule at IRCNET Network

----- next part -----

A non-text attachment was scrubbed...

Name: not available

Type: application/pgp-signature

Size: 187 bytes

Desc: not available

Url :

<http://lists.freebsd.org/pipermail/freebsd-hackers/attachments/20070127/db655aef/attachment-0001.pgp>

Message: 2

Date: Sat, 27 Jan 2007 14:53:59 +0100

From: Daniel Roethlisberger <daniel@xxxxxx>

Subject: Review request: new OMNIKEY CardMan 4040 driver

To: freebsd-hackers@xxxxxxxxxxx

Message-ID: <20070127135359.GA2167@xxxxxxxxxxxxxxxx>

Content-Type: text/plain; charset=us-ascii

I've already tried -drivers, but got no answers so far, so I am trying here.

I'm looking for source code review or early testers for my new OMNIKEY CardMan 4040 `cmx' driver (pccard smartcard reader). It seems to work, but there are some areas I am unsure about, especially the mutex, callout and msleep interaction when detaching.

Here is a diff against RELENG_6_1:

<http://dragon.roe.ch/~roe/cmx/cmx-6.1-20070124.diff.gz>

There's no manual page yet, but the driver itself should be complete. I can make the code available in other forms than a diff vs 6.1 if desired.

Thanks,
Dan

--

Daniel Roethlisberger <daniel@xxxxxx>

Message: 3
Date: Sat, 27 Jan 2007 07:42:14 -0800
From: Daniel Rudy <dr2867@xxxxxxxxxxxx>
Subject: sysctl(3) interface
To: freebsd-hackers@xxxxxxxxxxxx
Message-ID: <45BB72D6.9070809@xxxxxxxxxxxx>
Content-Type: text/plain; charset=ISO-8859-1

Hello List,

I've been taking apart and analyzing the sysctl(8) program to gain a better insight into how to use the sysctl(3) interface. Adding some debugging code to the program in strategic locations, this is what I have as an output:

```
debug: name: dev
debug: all: oid: 0 2 440
debug: name: dev.nexus.%parent
debug: oid: 440 912 913
debug: all: oid: 0 2 440 912 913
debug: name: dev.nexus.0.%desc
debug: oid: 440 912 914 915
debug: all: oid: 0 2 440 912 914 915
debug: name: dev.nexus.0.%driver
debug: oid: 440 912 914 916
debug: value: nexusdev.nexus.0.%driver: nexus
debug: all: oid: 0 2 440 912 914 916
debug: name: dev.nexus.0.%location
debug: oid: 440 912 914 917
debug: all: oid: 0 2 440 912 914 917
debug: name: dev.nexus.0.%pnpinfo
debug: oid: 440 912 914 918
debug: all: oid: 0 2 440 912 914 918
debug: name: dev.nexus.0.%parent
debug: oid: 440 912 914 919
debug: value: root0dev.nexus.0.%parent: root0
debug: all: oid: 0 2 440 912 914 919
debug: name: dev.acpi.%parent
debug: oid: 440 920 921
debug: all: oid: 0 2 440 920 921
debug: name: dev.acpi.0.%desc
debug: oid: 440 920 922 923
debug: value: AMIINT dev.acpi.0.%desc: AMIINT
debug: all: oid: 0 2 440 920 922 923
debug: name: dev.acpi.0.%driver
debug: oid: 440 920 922 924
```

```
debug: value: acpidev.acpi.0.%driver: acpi
debug: all: oid: 0 2 440 920 922 924
debug: name: dev.acpi.0.%location
debug: oid: 440 920 922 925
debug: all: oid: 0 2 440 920 922 925
debug: name: dev.acpi.0.%pnpinfo
debug: oid: 440 920 922 926
```

It's using an oid of 0 and 2 to get something, then it comes up with 440 and then a sequence of numbers that are incrementing in a peculiar pattern. I went looking and found that 0 is CTL_UNSPEC which according to the comment is unused, but I see it here in the program output.

I also noticed this little blurb in the source code too:

```
/*
 * These functions uses a presently undocumented interface to the kernel
 * to walk the tree and get the type so it can print the value.
 * This interface is under work and consideration, and should probably
 * be killed with a big axe by the first person who can find the time.
 * (be aware though, that the proper interface isn't as obvious as it
 * may seem, there are various conflicting requirements.
 */
```

But I figure it's for the actual display of the various variables and not for returning information about the dev tree.

So, my question is, how do I walk the tree to get the PnP info for all the devices in the system?

--
Daniel Rudy

Message: 4
Date: Sun, 28 Jan 2007 03:36:07 +0800
From: "Rong-en Fan" <grafan@xxxxxxxxxx>
Subject: how to determine if we are building lib32 in Makefile?
To: freebsd-hackers@xxxxxxxxxx
Message-ID:
<6eb82e0701271136n5538792eu31f464414e7dbaae@xxxxxxxxxxxxxxxxxx>
Content-Type: text/plain; charset=ISO-8859-1; format=flowed

I'm working on wide character support in base's ncurses. For some reason, I have to make lib/ncurses/ncursesw to include ncurses.h from its object directory. However, current lib32 uses something like

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cc ... -I\${LIB32TMP}/usr/includes ... -IFROM_NCURSES_MAKEFILE ...

Right now, I have the following:

```
.if ${.TARGET} == "installincludes" && !empty(${DESTDIR:M*/lib32/*})
INCS= ${HEADERS} ${SRCHDRS}
INCSLINKS= curses.h ${INCLUDEDIR}/ncurses.h
.endif
```

It works, but it's really ugly. Is there any other way to do this?

Thanks,
Rong-En Fan

Message: 5

Date: Sat, 27 Jan 2007 13:14:04 -0600

From: "Sam Fourman Jr." <sfourman@xxxxxxxxxx>

Subject: Re: Updated Driver for 3945ABG Intel 3945ABG Wireless LAN controller

To: "Gilbert Cao" <hika@xxxxxxxxxx>

Cc: Massimo Lusetti <mlusetti@xxxxxxxxxx>, Benjamin Close <Benjamin.Close@xxxxxxxxxxxxxxxxxx>, Florent Thoumie <flz@xxxxxxxxxxxxxxxx>, freebsd-hackers@xxxxxxxxxx, freebsd-drivers@xxxxxxxxxx, Attilio Rao <attilio@xxxxxxxxxx>, damien.bergamini@xxxxxxxx, sam@xxxxxxxxxx, gabor@xxxxxxxxxx, Max Laier <max@xxxxxxxxxxxxxxxx>

Message-ID:

<11167f520701271114j66f82398h83c43885b9d25e12@xxxxxxxxxxxxxxxx>

Content-Type: text/plain; charset=ISO-8859-1; format=flowed

I can also confirm that i get the firmware_get: failed to load firmware image wpi_fw on the 20070125 version.

I should note that I tried it on a fresh 6.2 RELEASE install.

Sam Fourman Jr.

On 1/27/07, Gilbert Cao <hika@xxxxxxxxxx> wrote:

> On Fri, Jan 26, 2007 at 11:09:51PM +1030, Benjamin Close wrote:

>> Hi Gilbert,

>> Thanks for the custom version. I've integrated the changes into the driver I'm working on.

>> For those wanting to test out the driver which is now fully up to date

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RE: freebsd-hackers Digest, Vol 200, Issue 7

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> place where I have also put if_wpi 20070121 version), even if it is not
> loaded.
>
> ---
> -----
> (hika) Gilbert Cao
> <http://www.miaouirc.com>
> - MiaouIRC Project 2002-2003
> <http://www.bsdmon.com>
> - The BSD DMON Power to serve
> IRC : #miaule at IRCNET Network
> -----
>
>
>

Message: 6
Date: Sat, 27 Jan 2007 19:22:04 -0700 (MST)
From: "M. Warner Losh" <imp@xxxxxxxxxx>
Subject: Re: atacontrol kernel crash (atausb?)
To: hselasky@xxxxxxx
Cc: freebsd-hackers@xxxxxxxxxx, freebsd-stable@xxxxxxxxxx,
ed@xxxxxx, pietro.cerutti@xxxxxxxxxx
Message-ID: <20070127.192204.-862243883.imp@xxxxxxxxxx>
Content-Type: Text/Plain; charset=us-ascii

In message: <200701241254.51900.hselasky@xxxxxxx>
Hans Petter Selasky <hselasky@xxxxxxx> writes:
: Instead of having all these quirks, isn't it possible that the SCSI layer can
: auto-probe this?

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The short answer is no. There's no reliable way to tell if a device supports a given scsi command, and some devices freak out (lock up) when sent one.

Warner

Message: 7

Date: Sat, 27 Jan 2007 21:35:32 -0800

From: Daniel Rudy <dr2867@xxxxxxxxxxxx>

Subject: Re: unique hardware identification

To: "Devon H. O'Dell" <devon.odell@xxxxxxxxxx>

Cc: Koen Martens <fbsd@xxxxxxxx>, freebsd-hackers@xxxxxxxxxxxx

Message-ID: <45BC3624.3000608@xxxxxxxxxxxx>

Content-Type: text/plain; charset=ISO-8859-1

At about the time of 12/19/2006 7:19 AM, Devon H. O'Dell stated the following:

> 2006/12/19, Koen Martens <fbsd@xxxxxxxx>:

>> Hi All,

>>

>> I was wondering, if something like a unique hardware identification
>> would be possible on FreeBSD.

>>

>> I'd like a machine to authenticate to a server, for which it will
>> need a unique identification. Problem is, it should be generated
>> automatically and not easy to fake / detect without already having
>> root access to the box.

>>

>> I'm thinking of something like combining serial numbers from
>> CPU/disks for example, but there does not seem to be a clear way to
>> obtain these (not all cpu's even have a serial number in there).

>>

>> I am just inquiring if someone on this list has an idea that might
>> help with this problem.

>>

>> Gr,

>>

>> Koen

>

> Hey Koen,

>

> I know a lot of people / companies use the MAC address of a given
> interface for this purpose, but it's not generally very useful since
> most interfaces will allow you to set your own MAC address.

>

> Something you could use instead is a one-wire device, attached to the
> motherboard (if it has a header for it). If the motherboard does not,
> you can get LCDs from e.g. CrystalFontz that provide an interface to

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> such devices. The Dallas one-wire thermometers have a unique 64-bit
> identifier on them, however this is only really useful if you have the
> ability to control the hardware platform.
>
> If you are attempting to identify a specific hardware platform (e.g. a
> standard set of motherboards and devices), you can enumerate devices
> and device IDs on the PCI bus, creating some sort of hash of those.
>
> In the end, with the client controlling the hardware, client-side
> security and validation is rather difficult. Even hacking the kernel
> to only run signed binaries is going to be difficult to keep secure,
> even keeping the key in some hardware secured storage, shipping the
> system without a debugger or symbols, and controlling the hardware.
>
> Thank you, media, for blowing the Pentium III CPUID feature up into
> something horrible. Uniquely identifiable hardware is very useful when
> licensing :\
>
> Regarding your questions, the serial number of the hard drive is
> usually not too difficult to figure out. Take a look at atacontrol(8),
> for instance:
>
> dho# atacontrol cap ad4
>
> Protocol Serial ATA II
> device model WDC WD1600JS-75NCB2
> serial number WD-WCANM3753524
>
> The serial number should be unique. camcontrol(8) can probably give
> you similar information for SCSI disks.
>
> Hope this is of some use. I'd be interested in seeing what others are doing.
>
> Kind regards,
>
> Devon H. O'Dell
>
> _____
> freebsd-hackers@xxxxxxxxxxxxx mailing list
> <http://lists.freebsd.org/mailman/listinfo/freebsd-hackers>
> To unsubscribe, send any mail to "freebsd-hackers-unsubscribe@xxxxxxxxxxxxx"
>

I've had this very question myself. Here's what I've done:

- 1) Use a USB Flash Drive as a hardware dongle. These devices have a vendor id, product id, and a serial number that is guaranteed to be unique.
- 2) Get the Link Layer Address off all the network interfaces in the system.
- 3) Get the model, serial, and firmware revision off the first harddrive

in the system.

4) Using the sysctl(3) interface, I found some undocumented stuff that let's you enumerate the pnp devices in the system. Well, the kernel tells you what they are.

--

Daniel Rudy

freebsd-hackers@xxxxxxxxxxx mailing list
<http://lists.freebsd.org/mailman/listinfo/freebsd-hackers>
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End of freebsd-hackers Digest, Vol 200, Issue 7

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