

# Re: HEADS UP: KBI breakage for Ethernet modules

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*Source:* <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/current/2007-05/msg01172.html>

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- *From:* Scott Long <[scottl@xxxxxxxxxxx](mailto:scottl@xxxxxxxxxxx)>
  - *Date:* Tue, 29 May 2007 09:18:39 -0600
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Yar Tikhyy wrote:

On Sun, May 27, 2007 at 03:51:29PM +0400, Yar Tikhyy wrote:

As discussed earlier on -net, I'd like to commit the following patch. It will bring ether\_ioctl() into accord with ioctl() WRT the type of the command argument. In our ioctl(), command became an u\_long ages ago, but ether\_ioctl() has never been fixed. With int and u\_long being of different widths on 64-bit arch'es, the discrepancy can get us in trouble sooner or later.

In fact, ioctl command coding is very unlikely to change, so it will continue to fit in 32 bits. OTOH, the C compiler should be uneasy about squeezing u\_long into int when ether\_ioctl() is called from an if\_ioctl handler, so this patch will be a little step on the way to a warning-free kernel.

This change will inevitably break the kernel interface to network modules, so all of them will need rebuilding.

I received several positive replies and no negative ones, so the change has just been committed. In fact, it breaks KBI on 64-bit platforms only. (Thanks to Ruslan Ermilov for reminding me about that.) Many thanks to those folks who encouraged the change.

Now all Ethernet-related kernel modules need to be rebuilt on 64-bit platforms. The conventional "make buildkernel" procedure will take care of stock modules, so only 3rd-party modules need some attention.

How does this affect 32-bit compatibility on amd64?

Scott

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freebsd-current@xxxxxxxxxxx mailing list

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