Re: Where is Bill Paul's NDIS miniport driver wrapper?

Source: http://unix.derkeiler.com/Mailing−Lists/FreeBSD/questions/2004−03/0244.html

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From: Michel Schwab (*michel.schwab_at_tpn.ch*)
Date: 03/02/04

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To: "Alistair Hamilton" <alistair@ahip.co.uk>, <freebsd−questions@freebsd.org>
Date: Tue, 2 Mar 2004 12:03:52 +0100
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Hi

I found this guide:

Commit the first cut of Project Evil, also known as the NDISulator.

Yes, it's what you think it is. Yes, you should run away now.

This is a special compatibility module for allowing Windows NDIS
miniport network drivers to be used with FreeBSD/x86. This provides
binary NDIS compatibility (not source): you can run NDIS driver
code, but you can't build it. There are three main parts:

sys/compat/ndis: the NDIS compat API, which provides binary
compatibility functions for many routines in NDIS.SYS, HAL.dll
and ntoskrnl.exe in Windows (these are the three modules that
most NDIS miniport drivers use). The compat module also contains
a small PE relocator/dynalinker which relocates the Windows .SYS
image and then patches in our native routines.

sys/dev/if_ndis: the if_ndis driver wrapper. This module makes
use of the ndis compat API and can be compiled with a specially
prepared binary image file (ndis_driver_data.h) containing the
Windows .SYS image and registry key information parsed out of the
accompanying .INF file. Once if_ndis.ko is built, it can be loaded
and unloaded just like a native FreeBSD kenrel module.

usr.sbin/ndiscvt: a special utility that converts foo.sys and foo.inf
into an ndis_driver_data.h file that can be compiled into if_ndis.o.
Contains an .inf file parser graciously provided by Matt Dodd (and
mercilessly hacked upon by me) that strips out device ID info and
registry key info from a .INF file and packages it up with a binary
image array. The ndiscvt(8) utility also does some manipulation of
the segments within the .sys file to make life easier for the kernel
loader. (Doing the manipulation here saves the kernel code from having

to move things around later, which would waste memory.)

ndiscvt is only built for the i386 arch. Only files.i386 has been
updated, and none of this is turned on in GENERIC. It should probably
work on pc98. I have no idea about amd64 or ia64 at this point.

This is still a work in progress. I estimate it's about %85 done, but
I want it under CVS control so I can track subsequent changes. It has
been tested with exactly three drivers: the LinkSys LNE100TX v4 driver
(Lne100v4.sys), the sample Intel 82559 driver from the Windows DDK
(e100bex.sys) and the Broadcom BCM43xx wireless driver (bcmwl5.sys). It
still needs to have a net80211 stuff added to it. To use it, you would
do something like this:

cd /sys/modules/ndis
make; make load
cd /sys/modules/if_ndis
ndiscvt −i /path/to/foo.inf −s /path/to/foo.sys −o ndis_driver_data.h
make; make load
sysctl −a | grep ndis

All registry keys are mapped to sysctl nodes. Sometimes drivers refer
to registry keys that aren't mentioned in foo.inf. If this happens,
the NDIS API module creates sysctl nodes for these keys on the fly so
you can tweak them.

An example usage of the Broadcom wireless driver would be:

sysctl hw.ndis0.EnableAutoConnect=1
sysctl hw.ndis0.SSID="MY_SSID"
sysctl hw.ndis0.NetworkType=0 (0 for bss, 1 for adhoc)
ifconfig ndis0 <my ipaddr> netmask 0xffffff00 up

Things to be done:

− get rid of debug messages
− add in ndis80211 support
− defer transmissions until after a status update with
NDIS_STATUS_CONNECTED occurs
− Create smarter lookaside list support
− Split off if_ndis_pci.c and if_ndis_pccard.c attachments
− Make sure PCMCIA support works
− Fix ndiscvt to properly parse PCMCIA device IDs from INF files
− write ndisapi.9 man page

cheers michel

−−−−− Original Message −−−−−
From: "Alistair Hamilton" <alistair@ahip.co.uk>
To: <freebsd−questions@freebsd.org>
Sent: Tuesday, March 02, 2004 11:28 AM

Subject: Where is Bill Paul's NDIS miniport driver wrapper?

> *Hello, all*
> *I have installed the FreeBSD 5.2.1, which I assumed to be the latest*
> *available. However, it does not appear to have the NDIS miniport driver*
> *in the kernel source and there is no /sys/modules/ndis . I need this*
> *for my Centrino 802.11b.*
> *Google has helped me to find quite a few references to it but I cannot*
> *find a relevant URL. Is this driver distributed separately? If so,*
> *where do I get it?*
> *TIA,*
> *Alistair*
> *−−*
> *alistair@irma:~$ uname −a*
> *FreeBSD irma.ty−eurgain 5.2.1−RELEASE FreeBSD 5.2.1−RELEASE #3: Mon Mar*
> *1 09:38:49 GMT 2004*
> *alistair@irma.ty−eurgain:/usr/obj/usr/src/sys/IRMAKERNEL i386*
> _____
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> *http://lists.freebsd.org/mailman/listinfo/freebsd−questions*
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