

Wired and wireless PCMCIA LAN cards: configuration problems

Source: <http://linux.derkeiler.com/Mailing-Lists/Debian/2007-03/msg00566.html>

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 - *Date:* Sat, 03 Mar 2007 10:04:26 +0000
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I have a Toshiba Tecra 8000 P2 laptop first with Sarge and now with Etgh installed, plus KDE. Normally, I am in Toronto, where for some time I have been using a D-Link 10/100 mb LAN + 56k FAX/modem PCMCIA for a wired RJ-45 connection from the laptop to my home LAN and beyond.

However, I am now in Chiang Mai, Thailand, for the next five weeks. The LAN in the building where I have rented a condo only has wireless for the individual units.

Consequently, for the duration I wanted to replace the aforementioned D-Link card with a wireless PCMCIA card (SMC model 2853W 802.11g, 2.4 gH, 54 mbps). Unfortunately, I have so far been unable to connect my laptop to the wireless LAN in the building. What I did to try to establish a connection follows.

Right after booting the laptop with that PC card installed, I opened the KDE KWiFiManager. By means of a laptop icon it indicated that the PC card was detected. However, no signal was found, presumably because any required configurations had not been done.

So from the KWiFiManager menu I selected the configuration editor as root and entered the following data in the "Config 1" tab -- the only one used: Network name left blank; autodetection of interface, indicated as eth0; no start-up script entered; encryption configured as follows: Key to use: Key 1. Crypto mode: open. Crypto Keys: in the slot for key 1 the ASCII code given me by the LAN administrator was entered; to right of code was the indication "WEP 64 bit hex", which also conformed with the information given me. The other three key slots are not used.

In the "General Settings" area, "Load preset configuration on start-up" selected. Configuration to Load=Config 1. Number of configurations=1.

I next selected "Activate". A window labelled "Information -- KDE Control Module" opened. The text in it read as follows:

The following settings could not be applied:

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Speed settings could not be modified.
Interface could not be re-enabled.

I selected "OK" to close that window, and then "Apply". My last action was at this point was to close the configuration editor window.

There was no change in the KWiFiManager as described above. So obviously what needed to be configured was not.

The only other thing I could think of doing at this point was to look at the Network Settings in the KDE Control Centre as root. It indicated the interface as "eth0", the protocol as "dhcp", the state as "disabled", and the comment as "Wireless Network Device".

By highlighting the line with all the foregoing information, two buttons below were activated: "Configure Device" and "Enable Device". Selecting the former produced another window with two panels in it.

The first panel was labeled TCP/IP address. The "automatic" button was already selected, with "dhcp" in the slot to the right of the button. Below that button was the "manual" button, unselected. At the bottom of this panel was the indication "Activate when the computer starts", the button for which was already checked.

The second panel was labeled "Wireless Settings". There were three slots to make entries: ESSID, which was empty; WEP key, which had 10 asterisks in it; and Key type, which had ASCII. In the ESSID slot I entered "any". I then selected "OK", which applied the change and closed the window.

I then selected "Enable Interface". Another window appeared, saying that the new configuration had not been changed and asked whether I wanted to apply the changes. I did and thereupon selected "Apply".

The network settings were saved, but then a new window appeared, with the title "Error While Listing Network Interfaces – KDE". The text message in the window read as follows:

Could not parse the XML output from
the network configuration backend.

After closing that window, the Wireless Network Device was still in Disabled state. Selecting "Apply" in the Network Settings window in the KDE Control Centre saves the settings once again, but the device state is still Disabled.

Besides the "Network Interfaces" tab in the "Network Settings" window, there were three others; Route, Domain Name System and Network Profiles. The first and third of those three were empty. The second, as far as I could determine, merely repeats the contents of the /etc/hosts file. It does indicate the static IP address of the laptop to connect

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to my home LAN in Toronto: 192.168.0.142.

Iwconfig returned the following:

lo no wireless extensions.

irda0 no wireless extensions.

```
eth0 NOT READY! ESSID:off/any
Mode:Managed Channel:0 Access Point: Not-Associated
Tx-Power=31 dBm Sensitivity=0/200
Retry min limit:0 RTS thr=0 B Fragment thr=0 B
Encryption key:ABCD-E123-44 Security mode:restricted
Link Quality:0 Signal level:0 Noise level:0
Rx invalid nwid:0 Rx invalid crypt:0 Rx invalid frag:0
Tx excessive retries:0 Invalid misc:0 Missed beacon:0
```

sit0 no wireless extensions.

At this point by chance I learned from someone else in the building who also uses Linux (Suse) on his laptop, that for at least half of the wireless PCMCIA cards out there the ndiswrapper must be used. So I installed all the ndiswrapper packages (-source, -common, -utils-1.1 and utils-1.9) and then ran as root "ndiswrapper -i /media/cdrom0/SMC2835W.INF". This .INF file I got from the CDROM which came with the card when I bought it in February 2005.

To check whether the driver was installed I ran "ndiswrapper -l". It returned the following line:

```
smc2835w invalid driver!
```

I noticed that after booted the laptop with the SMC card already installed the following three lines appeared six times in that part of the syslog file relating to each such boot:

```
localhost kernel: eth0: uploading firmware
localhost kernel: prism54: request firmware() failed for 'isl3890'
localhost kernel: eth0: could not upload firmware ('isl3890')
```

Command lspci returned, among other things:

```
05:00.0 Network controller: Intersil Corporation ISL3890
[Prism/GTPPrism Duette]/ISL3886 [Prism Javelin/Prism Xbow] (rev 01)
```

The other person in the building with Linux Suse on his laptop tried to download from Prism54.org the ISL3890 firmware and install it, but could not do so.

I then found and tested on my laptop another wireless PCMCIA LAN card, this time a surecom EP-9428-g\3A. I installed the .INF file for this

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card, which apparently is `rt2500.INF` and ran `ndiswrapper -l`. Once again it returned:

```
installed drivers:
rt2500 invalid driver!
```

At this point both the aforementioned other person and I concluded that the "invalid driver!" return may be false, and that there may be something else causing this return. However, both he and I are at a loss as to what it might be. Put plainly, we need help.

Because of the inability to connect by wireless in the building, I have had to go elsewhere for a wired connection using the D-Link card. When I first did so however another problem emerged. If I booted the laptop with the D-Link card already installed, when I tried to open to my user the laptop hung.

After some experimentation I found that I had to install the D-Link card *after* I successfully opened to my user. Only then did I have an operational machine connected to the network.

Examination of the messages which scrolled by while booting up revealed the following, which by the way did not appear in the `syslog` file, or show in `dmesg`:

```
Configuring network interfaces ... /etc/network/interfaces:10:
misplaced option
ifup: couldn't read interfaces file "/etc/network/interfaces"
```

Running "`ifup eth0`" returns the same, with the exception of the text preceding the elipsis.

The file `/etc/network/interfaces` reads as follows:

```
1 # This file describes the network interfaces available on your system
2 # and how to activate them. For more information, see interfaces(5).
3
4 # The loopback network interface
5 auto lo
6 iface lo inet loopback
7
8 # The primary network interface
9 allow-hotplug eth0
10 address 127.0.0.1
11 netmask 255.0.0.0
12 iface eth0 inet dhcp
13
14
15 auto eth0
```

When I commented out line 10, "`ifup eth0`" returned the same as above,

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with number 11 replacing 10. When I commented out both lines 10 and 11, "ifup eth0" tried to ping to the network. I did this test while unconnected; I am sure that if I had been connected the pings would have received a positive response.

With the D-Link card installed ifconfig returns the following:

```
eth0 Link encap:Ethernet HWaddr 00:50:BA:78:00:6D
inet6 addr: fe80::250:baff:fe78:6d/64 Scope:Link
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:0 errors:0 dropped:0 overruns:0 frame:0
TX packets:33 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:0 (0.0 b) TX bytes:6344 (6.1 KiB)
Interrupt:10 Base address:0x300
```

```
lo Link encap:Local Loopback
inet addr:127.0.0.1 Mask:255.0.0.0
inet6 addr: ::1/128 Scope:Host
UP LOOPBACK RUNNING MTU:16436 Metric:1
RX packets:182 errors:0 dropped:0 overruns:0 frame:0
TX packets:182 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:13368 (13.0 KiB) TX bytes:13368 (13.0 KiB)
```

In any event, I can get the D-Link card to connect, even though I have to open to my user before installing it. On the other hand I cannot connect with either of the two wireless cards I tried.

The priority task is to get a wireless connection. I would certainly appreciate all the help I can get to be able to do so. I would also like to be able to switch from one card to the other without difficulty, by obviating the problem mentioned in the proceeding paragraph.

Regards,

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