

DLink DWL-650 on Linux RH 7.1

The wireless card installation can be divided into three steps:

1. Installing the PCMCIA source
2. Installing the linux-wlan-ng package
3. Modifications, to the wlan configuration files, that are necessary yet not mentioned anywhere ☺

1. Installing the PCMCIA source

The first step is to install the *PCMCIA Card Services* (pcmcia-cs) package. This package can be downloaded from prdownloads.sourceforge.net/pcmcia-cs and the version used in this example is pcmcia-cs-3.1.33. Download and extract the tarball into a directory, say /downloads/pcmcia-cs-3.1.33. The make commands and the options selected are given below. The only default option that needs modification is the Linux source directory which should be /usr/src/linux-2.4 (assuming that the kernel source is already installed):

```
$ cd /downloads/pcmcia-cs-3.1.33
$ make config

----- Linux PCMCIA Configuration Script -----
The default responses for each question are correct for most users.
Consult the PCMCIA-HOWTO for additional info about each option.
Linux source directory [/usr/src/linux]: /usr/src/linux-2.4
The kernel source tree is version 2.4.2-2.
The current kernel build date is Sun Apr 8 20:41:30 2001.
Build 'trusting' versions of card utilities (y/n) [n]:
Include 32-bit (CardBus) card support (y/n) [y]:
Include PnP BIOS resource checking (y/n) [n]:
Module install directory [/lib/modules/2.4.2-2]:
Kernel configuration options:
Kernel-tree PCMCIA support is enabled.
Symmetric multiprocessing support is disabled.
PCI BIOS support is enabled.
Power management (APM) support is enabled.
SCSI support is enabled.
IEEE 1394 (FireWire) support is enabled.
Networking support is enabled.
Radio network interface support is enabled.
Token Ring device support is enabled.
Fast switching is disabled.
Frame Diverter is disabled.
Module version checking is enabled.
Kernel debugging support is disabled.
Preemptive kernel patch is disabled.
/proc filesystem support is enabled.
Maximum physical memory: 1GB
It looks like you have a System V init file setup.

X Windows include files found.
Forms library not installed.
If you wish to build the 'cardinfo' control panel, you need the Forms library and
the X Windows include files. See the HOWTO for details.

Configuration successful.

$ make all
```

There is **no** need to install the pcmcia-cs source, just building it is enough. Therefore, **DO NOT** give the “\$ make install” command.

2. Installing the linux-wlan-ng package

This device driver package can be downloaded from www.linux-wlan.com/linux-wlan. The driver version used here is linux-wlan-ng-0.1.14-pre3. Download and extract the tarball into a directory, say /downloads/linux-wlan-ng-0.1.14-pre3. The installation commands and configuration are given below. Two default options need to be changed: 1) Linux source directory should be /usr/src/linux-2.4; and 2) pcmcia-cs source dir should be /downloads/pcmcia-cs-3.1.33 (Recall that the pcmcia-cs source was built in /downloads/pcmcia-cs-3.1.33).

```
$ cd /downloads/linux-wlan-ng-0.1.14-pre3
$ make config

----- Linux WLAN Configuration Script -----

The default responses are correct for most users.

Build Prism2.x PCMCIA Card Services (_cs) driver? (y/n) [y]:
Build Prism2 PLX9052 based PCI (_plx) adapter driver? (y/n) [n]:
Build Prism2.5 native PCI (_pci) driver? (y/n) [n]:
Build Prism2.5 USB (_usb) driver? (y/n) [n]:

Linux source directory [/usr/src/linux]:/usr/src/linux-2.4

The kernel source tree is version 2.4.2-2.
The current kernel build date is Sun Apr 8 20:41:30 2001.
WARNING: the source tree has a build date of Mit Okt 16 04:02:22 2002.
date: invalid date `Mit Okt 16 04:02:22 2002'
./Configure: [: -gt: unary operator expected

pcmcia-cs source dir [/usr/src/pcmcia-cs-3.1.33]:/download/pcmcia-cs-3.1.33

Build for Kernel PCMCIA? (y/n) [n]:

Alternate target install root directory on host []:
PCMCIA script directory [/etc/pcmcia]:
Module install directory [/lib/modules/2.4.2-2]:

It looks like you have a System V init file setup.

Target Architecture? (i386, ppc, arm, or alpha) [i386]:

Prefix for build host compiler? (rarely needed) []:

Compiling with a cross compiler? (y/n) [n]:

Build for debugging (see doc/config.debug) (y/n) [n]:

Configuration successful.

$ make all
$ make install
```

3. Modifications that are necessary yet not mentioned anywhere

At this point, the linux-wlan-ng device driver has been installed. However, my wireless card was still unable to communicate with the access point. After a week long ordeal I discovered that the SSID has to be manually entered in the configuration file (`/etc/pcmcia/wlan-ng.opts`). Enter the SSID, say "tsunami", in the following two lines of the aforementioned configuration file:

```
ESSID="tsunami"  
DesiredSSID="tsunami"
```

Reboot your machine and insert the card in the PCMCIA slot. If the card successfully associates with the access point, you should hear two beeps of the same pitch. You can then use the `ifconfig` and `lsmod` commands to verify that you are associated and using the correct driver respectively.