



Using A Three Data Modem under LINUX

Mobile Broadband for LINUX

Recently Three Ireland have released the 3DataModem which offers broadband speed internet access to Windows and Macintosh users. The small data modem comes with a pay monthly option or alternatively with a top-up option (3Pay) similar to what most mobile phone operators already have on offer. Top-up vouchers can be purchased in most shops around the country to be used to buy internet access time for weeks and months online.

It is the purpose of this information sheet to explain how LINUX users can avail of this very attractive way of getting broadband internet access ready to run on their laptops and PCs, too.

Enabling the hardware

The modem provides a device file `/dev/ttyUSB0` after the kernel has recognized it via the `usbserial` module. Unless you do not have such a device file you cannot use the modem for dialing into the internet. As the modem also contains a memory it usually becomes visible as a disk after being plugged into the USB bus. To prevent that the modem is recognized as a disk the following file `15-three.rules` has to be placed in the directory `/etc/udev/rules.d`

```
SUBSYSTEM=="usb", SYSFS{idProduct}=="2000", SYSFS{idVendor}=="19d2"
RUN:="exit 0"
```

Now the kernel can access the data modem via the `usbserial` kernel module and use the hardware to establish a `ppp` connection with the THREE access point.

Dialing into the internet

The following script will take care of all required processes to dial into the internet. It is run to start the connection and checks if the name service is set up correctly and finally starts up the `ppp` daemon. There are two configuration files `three.chat` and `three.options` that provide the necessary information to the `ppp` daemon.

```
#!/bin/bash
DEVICE=/dev/ttyUSB0
if [[ ! -f /etc/udev/rules.d/15-three.rules ]]; then
    cp 15-three.rules /etc/udev/rules.d/
fi
if [[ ! -c /dev/ttyUSB0 ]]; then
    modprobe usbserial vendor=0x19d2 product=0x0001
fi
grep 159.134.237.6 /etc/resolv.conf 2> /dev/null
if [[ $? != 0 ]]; then
    echo "nameserver 159.134.237.6" >> /etc/resolv.conf
fi
/usr/sbin/pppd file three.options connect \
'/usr/sbin/chat -v -f three.chat ' $DEVICE
```

`/kx/three/three.chat`

```
ABORT BUSY
ABORT VOICE
ABORT "NO CARRIER"
ABORT "NO DIALTONE"
ABORT "NO DIAL TONE"
"" ATZ
OK ATE0V1&D2&C1S0=0+IFC=2,2
OK AT+CGDCONT=1,"IP","3ireland.ie"
OK ATDT*99#
CONNECT ""
```

`/kx/three/three.options`

```
460800
noipdefault
defaultroute
persist
noauth
updetach
novj
novjccomp
nopcomp
nodeflate
holdoff 5
```

That is all you need to successfully dial into the internet. You can download all scripts and this information sheet at

<http://kerry-linux.ie/broadband/three.tar>

We have tested this solution to work on Fedora 8, Suse 10.3, Ubuntu 7.10, Mandriva One 2008 and Gentoo 2007.0

If you have any further questions, please visit our website: <http://kerry-linux.ie>
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