

Lucent modem driver compilation failure

Source: <http://linux.derkeiler.com/Newsgroups/linux.redhat.misc/2003-11/0086.html>

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Date: 11/08/03

Date: Sat, 08 Nov 2003 20:04:19 +0000

I'm trying to compile an installable module for my internal modem following instructions as per the LTModem drivers page. I know the modem and driver work as they were fully functional under RH7.3.

I'm now using fedora 0.95, but no precompiled module is available for the current kernel (2.4.22-1.2088.nptl). I've not compiled kernel modules before. However, I made a link to /usr/src/linux from the 'real' source tree. I've done make clean, checked the setup with make xconfig and ran make dep, all with no problems. I've checked that all the utilities required by the build_module script are present and of relevent versions.

I feel I've done everything right, but I get a compilation error:

```
Using KCFLAGS for gcc version 3.x
gcc -D__KERNEL__ -I/lib/modules/2.4.22-1.2088.nptl/build/include -Wall
-Wstrict-prototypes -O3 -fomit-frame-pointer -fno-strict-aliasing -pipe
-fno-strength-reduce -DMODULE -DLT_VERSION=8.26a9 -DLINUX -DNO_EEPROM
-DLT_SERIAL_MODULE=lt_serial -c -o ltmodem.a ltmodem.c
ld -r -o lt_modem.o ltmodem.a ltmdmobj.o".gcc3"
Using KCFLAGS for gcc version 3.x
gcc -D__KERNEL__ -I/lib/modules/2.4.22-1.2088.nptl/build/include -Wall
-Wstrict-prototypes -O3 -fomit-frame-pointer -fno-strict-aliasing -pipe
-fno-strength-reduce -DMODULE -DLT_VERSION=8.26a9 -DLINUX -DNO_EEPROM
-DLT_SERIAL_MODULE=lt_serial -c -o serial-lt-2.4.a serial-lt-2.4.c
serial-lt-2.4.c: In function `rs_close':
serial-lt-2.4.c:2994: error: invalid operands to binary ==
serial-lt-2.4.c: At top level:
serial-lt-2.4.c:2584: warning: `rs_break' defined but not used
make: *** [serial-lt-2.4.a] Error 1
```

I do a fair amount of C coding and to me this seems to be an error in the code and not an external problem. I could be wrong tho' ;-)

Any pointers for what try next would be greatly appreciated . The detailed output from the compilation script is added below.

TIA
Chris.

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Linux Newbies should check DOCs/Installers and if still necessary

<http://www.heby.de/lmodem> for already available driver installers

Together with information included in DOCs/,
this report may enable you to solve problems.

But if further help is needed, send BLDrecord.txt to discuss@linmodems.org

Please use the following in the email Subject Line:

Lucent modem, redhat Fedora Core release 0.95 (Severn) 2.4.22-1.2088.nptl

DISTRO=redhat-release

DISTR=redhat

DVERSION= Fedora Core release 0.95 (Severn)

ACTION=./build_module

WHOAMI=cbc

Sat Nov 8 19:14:44 GMT 2003

Linux localhost.localdomain 2.4.22-1.2088.nptl #1 Thu Oct 9 20:39:56 EDT

2003 i686 athlon i386 GNU/Linux

----- beginning SCANMODEM section -----

If further help is needed, send a description of your problem to:

discuss@linmodems.org

with this ModemData.txt Attached.

using the following in the email Subject Line:

build_module, redhat kernel 2.4.22-1.2088.nptl

System info follows

=====

redhat

Script executed as: build_module

on system: Linux localhost.localdomain 2.4.22-1.2088.nptl #1 Thu Oct

9 20:39:56 EDT 2003 i686 athlon i386 GNU/Linux

LSPCI=/sbin/lspci

UPDATE=2002 Nov 13

----- lspci scan -----

00:00.0 Host bridge: VIA Technologies, Inc. VT8363/8365 [KT133/KM133]

(rev 03)

00:01.0 PCI bridge: VIA Technologies, Inc. VT8363/8365 [KT133/KM133 AGP]

00:07.0 ISA bridge: VIA Technologies, Inc. VT82C686 [Apollo Super South]

(rev 40)

00:07.1 IDE interface: VIA Technologies, Inc.

VT82C586A/B/VT82C686/A/B/VT8233/A/C/VT8235 PIPC Bus Master IDE (rev 06)

00:07.2 USB Controller: VIA Technologies, Inc. USB (rev 16)

00:07.3 USB Controller: VIA Technologies, Inc. USB (rev 16)

00:07.4 Bridge: VIA Technologies, Inc. VT82C686 [Apollo Super ACPI] (rev 40)

00:0b.0 Multimedia audio controller: Yamaha Corporation YMF-744B [DS-1S

Audio Controller] (rev 02)

00:0f.0 Communication controller: Lucent Microelectronics LT WinModem

(rev 02)

01:00.0 VGA compatible controller: nVidia Corporation NV20 [GeForce3 Ti

200] (rev a3)

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Reading more detail for the Device at:

PCI bus

00:0f.0 Class 0780: 11c1:044c (rev 02)

Subsystem 11c1:044c

00:0f.0 Communication controller: Lucent Microelectronics LT WinModem
(rev 02)

Subsystem: Lucent Microelectronics LT WinModem

Flags: bus master, medium devsel, latency 32, IRQ 5

Memory at e4008000 (32-bit, non-prefetchable) [size=256]

I/O ports at e400 [size=8]

I/O ports at e800 [size=256]

Capabilities: <available only to root>

11c1:044c PCI bus PCI_ID with vendor component: 11c1

11c1:044c and Subsystem PCI_ID with vendor: 11c1

are key Sought Descriptions of your modem firmware.

Have them ready when visiting URLs with service software!!

For soft modems in AC'97 controller slots, the bus PCI_ID describes
the Controller

and the Subsystem PCI_ID the modem card inserted into it. A soft
modem chipset

must be determined (guessed ?) to guide the choice of driver resources.

It may be useful to download <http://www.yourvote.com/pci/vendors.txt>
and search it for vendor with and without caps, for example: both
114d and 114D

DSP=1

A supported Lucent/Agere DSP chipset modem is identified:

PCI_ID=11c1:044c

VENDOR 0x11c1 DEVICE 0x044c

ID are within the serviced ranges for Lucent/Agere DSP modems:

LUCENT 0x11c1 0x0440-0x045c

XIRCOM 0x115d 0x0000-0x000F

XIRCOM 0x115d 0x0440-0x045c

XIRCOM 0x115d 0x0010-0x03ff

Drivers and their compiler kits are available at:

<http://www.heby.de/ltmodem/>

Checking primary Vendor=11c1 through major modem chipset Vendors

Vendor=11c1 corresponds to Lucent Technologies or subsidiary Agere
Systems, Inc.

Information is at: http://www.agere.com/support/client/modem_drivers.html

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but without any relevant to Linux.

Checking Subsystem Vendor=11c1 through major modem chipset Vendors

Vendor=11c1 corresponds to Lucent Technologies or subsidiary Agere Systems, Inc.

Information is at: http://www.agere.com/support/client/modem_drivers.html

but without any relevant to Linux.

Get Lucent/Agere information at:

http://www.agere.com/support/client/modem_drivers.html

The desired installer name is like:

=====
ltmodem-kv-2.4.22_1.2088.nptl-8.22a5-1.i686.rpm
=====

ltmodem-kv-Kernel_FL-LTver---.CPU.rpm explains the versioning.
LTver 8.22a5 is the release of the resource
used in compiling and assembling driver packages.
8.22 is the Agere core code designation.

A suitable installer is not available as of this 2002 Nov 13 update.
Check in the section redhat at <http://www.heby.de/ltmodem>
for a subsequent Installer submission.
If not present use the ltmodem-8.22a5.tar.gz compiler kit.

The list of available Installers for redhat
is inserted into to BLDrecord.txt.2
GCCversion=3.3.1

The following information blocks just query some ppp support items.

=====
grep ppp /etc/modules.conf

DEVPPP=crw----- 1 root root 108, 0 Sep 15 14:40 /dev/ppp
DEVFS=
DEVFSD=

----- ending SCANMODEM section -----

BASE=source
===SETTINGS===
LT_SERIAL_MODULE="lt_serial"
LT_PROPRIETARY_MODULE="lt_modem"
DOCS="1ST-READ CHANGELOG UPDATES-BUGS DOCs utils"
LT_VERSION="8.26a9"
KPKG="kernel"

FV=
checking whether we are using GNU C... yes
using /lib/modules/2.4.22-1.2088.nptl/build

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```
kernel headers are version 2.4.22-1.2088.nptl
BUILD_LINK=/lib/modules/2.4.22-1.2088.nptl/build ->
../../usr/src/linux-2.4.22-1.2088.nptl
HEADERS_IN=/lib/modules/2.4.22-1.2088.nptl/build/include/linux/
MODVERH=yes
```

Next checking utility versions, with ranges

```
Version_min
Utility or range for kernels
name 2.2.16 2.4.18 Actual_version
Gnu C 2.7.2.3 2.95.3-3.2.1 3.3.1
Gnu make 3.79.1 3.77 3.79.1
binutils 2.8.1.0.23 2.9.1.0.25 2.14.90.0.6
```

The gcc compiler resources available are:

```
-----
-rwxr-xr-x 2 root root 83668 Oct 2 01:27 /usr/bin/gcc
-rwxr-xr-x 1 root root 79452 Jun 2 21:55 /usr/bin/gcc32
-----
```

with your System currently using version 3.3.1

Do NOT mix the major versions of compilers for the kernel and modem drivers

or your System will crash! The following releases are using gcc version 3.2.x :

Mandrake 9, Redhat 8 and SuSE 8.1 in November 2002.

This build_module automatically adjusts its resources to the compiler version used.

See the utils/ltrename (by Mark Spieth) called by the Makefile.

```
-rw-rw-r-- 1 cbc cbc 543456 Nov 8 19:15 lt_modem.o
```

If you cannot solve the problem, send BLDrecord.txt to:
discuss@linmodems.org