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Linux Configure Tata Indicom Photon+ Mobile Broadband

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[1]

I've Huawei technologies EC1260 CDMA HSIA USB modem. How do I configure Tata Teleservices "Tata Photon+ Mobile Broadband" Service under Linux operating systems using this modem?

EC1260 HSIA USB modem support download speed of upto 3.1Mbps and upload speed of upto 1.8Mbps.

[2]

The driver for this modem is provided with Linux kernel 2.6.20 or above. In other words any modern Linux distribution will able to use this modem out of box. The following instructions are tested on:

1. Debian Linux 5.x
2. Ubuntu Linux 9.10
3. Fedora Linux 12 / Redhat & friends

Step #1: Get Required Software

=> **wvdial** - Text based PPP dialer with built-in intelligence.
OR
=> **gnome-ppp** - GUI based modem Internet connection tool for the GNOME Desktop.

Linux Drivers For EC1260 CDMA HSIA USB modem

The following drivers are used by Linux:

- **usbserial** - USB serial driver (modem driver).
- **usb-storage** - USB pen driver.

Install Required Software

You can install any one of the above program from the CD/DVD or via the Internet (connect using Ethernet or any other medium). Once connected install the wvdial package under Debian / Ubuntu Linux, run:

```
# apt-get install wvdial gnome-ppp
```

If you are using Redhat / Fedora / CentOS Linux, enter:

```
# yum install wvdial
```

Step #2: Stop Services

Turn off other networking interface (such as vmware or virtual box networking):

```
# /etc/init.d/vmware stop
# ifconfig eth0 down
```

Make sure you remove other usb storage devices such as pen or external hard disk and remove usb-storage driver:

```
# rmmod usb_storage
```

Above will make sure you get correct routing table (you can turn on all other services once connected).

Note if you know how to set static routing using route command skip the step # 2.

Step #3: Install Modem

Insert the USB modem and monitor your /var/log/messages file, enter:

```
# tail -f /var/log/messages
```

Sample outputs:

```
Dec  4 10:08:30 vivek-desktop kernel: [ 3957.760015] usb 4-2: new full speed USB device usi
Dec  4 10:08:30 vivek-desktop kernel: [ 3957.932103] usb 4-2: configuration #1 chosen from
Dec  4 10:08:30 vivek-desktop kernel: [ 3957.959732] Initializing USB Mass Storage driver..
Dec  4 10:08:30 vivek-desktop kernel: [ 3957.961031] scsi15 : SCSI emulation for USB Mass S
Dec  4 10:08:30 vivek-desktop kernel: [ 3957.961146] usbcore: registered new interface driv
Dec  4 10:08:30 vivek-desktop kernel: [ 3957.961150] USB Mass Storage support registered.
Dec  4 10:08:30 vivek-desktop kernel: [ 3958.240046] usb 4-2: USB disconnect, address 4
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.520015] usb 4-2: new full speed USB device usi
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.703066] usb 4-2: configuration #1 chosen from
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.717371] scsi19 : SCSI emulation for USB Mass S
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.727347] USB Serial support registered for GSM
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.727388] option 4-2:1.0: GSM modem (1-port) con
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.727481] usb 4-2: GSM modem (1-port) converter
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.727495] option 4-2:1.1: GSM modem (1-port) con
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.727550] usb 4-2: GSM modem (1-port) converter
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.727563] option 4-2:1.2: GSM modem (1-port) con
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.727617] usb 4-2: GSM modem (1-port) converter
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.727639] usbcore: registered new interface driv
Dec  4 10:08:31 vivek-desktop kernel: [ 3958.727642] option: v0.7.2:USB Driver for GSM mode
Dec  4 10:08:36 vivek-desktop kernel: [ 3963.714729] scsi 19:0:0:0: CD-ROM            HUAWE
Dec  4 10:08:36 vivek-desktop kernel: [ 3963.717721] scsi 19:0:0:1: Direct-Access     HUAWE
Dec  4 10:08:36 vivek-desktop kernel: [ 3963.746710] sr3: scsi-1 drive
Dec  4 10:08:36 vivek-desktop kernel: [ 3963.746951] sr 19:0:0:0: Attached scsi generic sg6
Dec  4 10:08:36 vivek-desktop kernel: [ 3963.747085] sd 19:0:0:1: Attached scsi generic sg7
Dec  4 10:08:36 vivek-desktop kernel: [ 3963.807173] sd 19:0:0:1: [sdd] Attached SCSI remov
```

Type the following command to display information about USB buses in the system and the devices connected to them, enter:

```
# lsusb
```

Sample outputs:

```
Bus 002 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 004 Device 003: ID 12d1:140b Huawei Technologies Co., Ltd.
Bus 004 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 005 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 003 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
```

Step #4: wvdial Configuration

The wvdialconf command detects your modem, its maximum baud rate, and a good initialization string and generates or updates the wvdial configuration file based on this information. Type the following command:

```
# wvdialconf
```

Sample outputs:

```
Editing `/etc/wvdial.conf'.

Scanning your serial ports for a modem.

ttyS0<*1>: ATQ0 V1 E1 -- failed with 2400 baud, next try: 9600 baud
ttyS0<*1>: ATQ0 V1 E1 -- failed with 9600 baud, next try: 115200 baud
ttyS0<*1>: ATQ0 V1 E1 -- and failed too at 115200, giving up.
ttyS1<*1>: ATQ0 V1 E1 -- failed with 2400 baud, next try: 9600 baud
```

```
ttyS1<*1>: ATQ0 V1 E1 -- failed with 9600 baud, next try: 115200 baud
ttyS1<*1>: ATQ0 V1 E1 -- and failed too at 115200, giving up.
Modem Port Scan<*1>: S2   S3
WvModem<*1>: Cannot get information for serial port.
ttyUSB0<*1>: ATQ0 V1 E1 -- OK
ttyUSB0<*1>: ATQ0 V1 E1 Z -- OK
ttyUSB0<*1>: ATQ0 V1 E1 S0=0 -- OK
ttyUSB0<*1>: ATQ0 V1 E1 S0=0 &C1 -- OK
ttyUSB0<*1>: ATQ0 V1 E1 S0=0 &C1 &D2 -- OK
ttyUSB0<*1>: ATQ0 V1 E1 S0=0 &C1 &D2 +FCLASS=0 -- OK
ttyUSB0<*1>: Modem Identifier: ATI -- Manufacturer: +GMI: HUAWEI TECHNOLOGIES CO., LTD
ttyUSB0<*1>: Speed 9600: AT -- OK
ttyUSB0<*1>: Max speed is 9600; that should be safe.
ttyUSB0<*1>: ATQ0 V1 E1 S0=0 &C1 &D2 +FCLASS=0 -- OK
WvModem<*1>: Cannot get information for serial port.
ttyUSB1<*1>: ATQ0 V1 E1 -- failed with 2400 baud, next try: 9600 baud
ttyUSB1<*1>: ATQ0 V1 E1 -- failed with 9600 baud, next try: 9600 baud
ttyUSB1<*1>: ATQ0 V1 E1 -- and failed too at 115200, giving up.
WvModem<*1>: Cannot get information for serial port.
ttyUSB2<*1>: ATQ0 V1 E1 -- OK
ttyUSB2<*1>: ATQ0 V1 E1 Z -- OK
ttyUSB2<*1>: ATQ0 V1 E1 S0=0 -- OK
ttyUSB2<*1>: ATQ0 V1 E1 S0=0 &C1 -- OK
ttyUSB2<*1>: ATQ0 V1 E1 S0=0 &C1 &D2 -- OK
ttyUSB2<*1>: ATQ0 V1 E1 S0=0 &C1 &D2 +FCLASS=0 -- OK
ttyUSB2<*1>: Modem Identifier: ATI -- Manufacturer: +GMI: HUAWEI TECHNOLOGIES CO., LTD
ttyUSB2<*1>: Speed 9600: AT -- OK
ttyUSB2<*1>: Max speed is 9600; that should be safe.
ttyUSB2<*1>: ATQ0 V1 E1 S0=0 &C1 &D2 +FCLASS=0 -- OK

Found a modem on /dev/ttyUSB0.
Modem configuration written to /etc/wvdial.conf.
ttyUSB0: Speed 9600; init "ATQ0 V1 E1 S0=0 &C1 &D2 +FCLASS=0"
ttyUSB2: Speed 9600; init "ATQ0 V1 E1 S0=0 &C1 &D2 +FCLASS=0"
```

Here is sample updated /etc/wvdial.conf file:

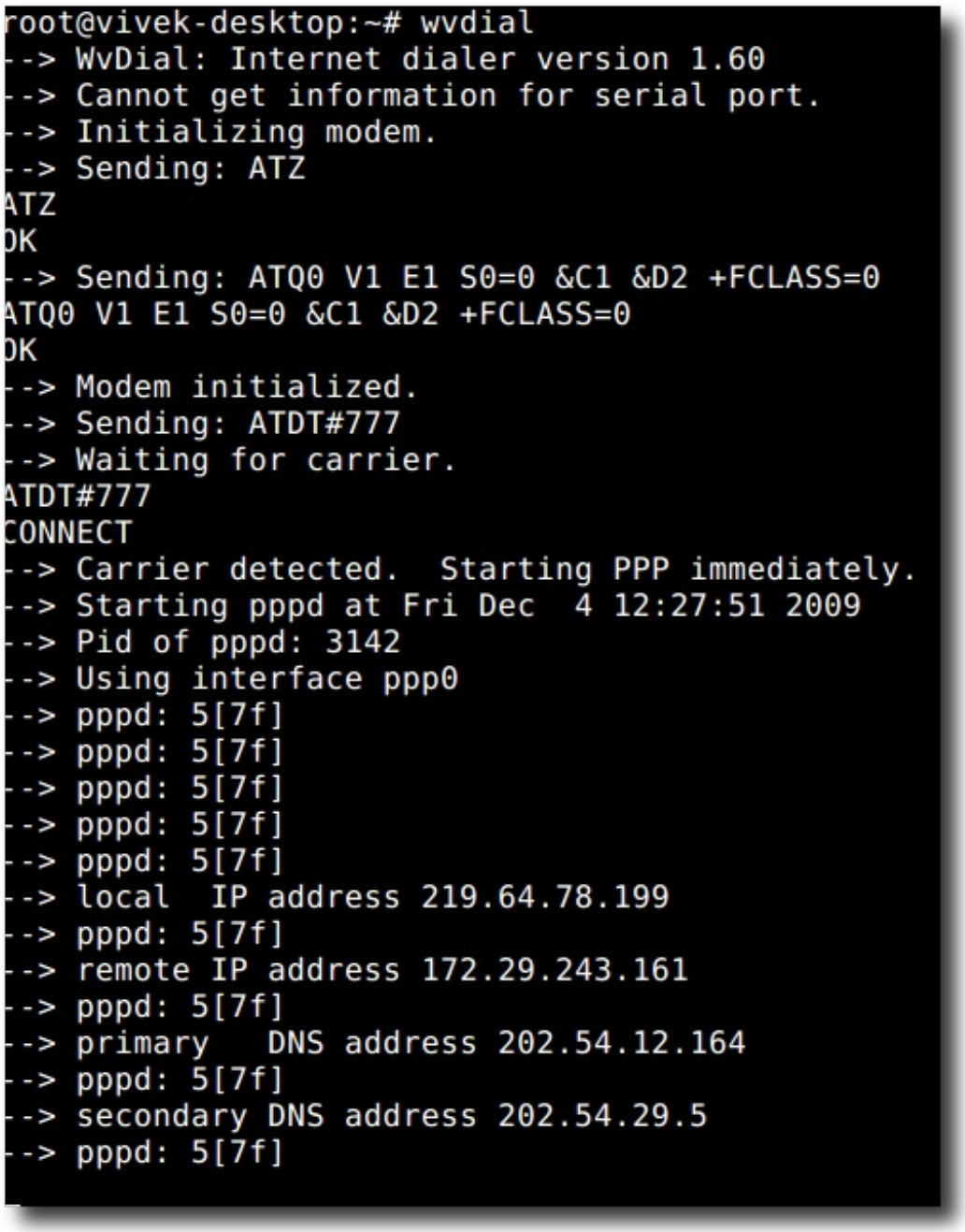
```
[Dialer Defaults]
Modem = /dev/ttyUSB2
Phone = #777
Username = internet
Password = internet
New PPPD = yes
stupid Mode = 1
```

How Do I Connect To The Internet?

Simply type the wvdial command [3], enter:

```
# wvdia
```

Sample outputs:



[4]

Fig.01: Configuring Photon+ Huawei EC 1260 in Linux (connected via ppp)

Test The Internet Connection

Send ping request [5], enter:

```
ping google.co.in
ping cyberciti.biz
```

If you cannot ping ...

Edit /etc/resolv.conf [6], enter:

```
# vi /etc/resolv.conf
```

Update it as follows:

```
nameserver 202.54.12.164
nameserver 202.43.29.5
```

Save and close the file. Test it again:

```
# ping google.com [5]
```

Once connected you can start your vmware or bring back eth0 connections. Make sure routing setup correctly for other network device:

```
# route -n
```

To disconnect the Internet session (wvdia dialar) simply hit [CTRL]+[C] or run killall command:

```
# killall wvdial
```

Further readings:

- Tata Indicom Broadband Services [7]

URLs in this post:

[1] Image: **http://www.cyberciti.biz/faq/category/networking/**
[2] Image: **http://www.cyberciti.biz/faq/category/linux/**
[3] wvdial command: **http://www.cyberciti.biz/tips/linux-configure-modem-to-connect-to-the-internet-using-a-ppp-dialup-account.html**
[4] Image: **http://www.cyberciti.biz/faq/howto-configure-tataindicom-mobile-broadband-on-linux/tata-indicom/**
[5] ping request: **http://www.cyberciti.biz/tips/simple-linux-and-unix-system-monitoring-with-ping-command-and-scripts.html**
[6] /etc/resolv.conf: **http://www.cyberciti.biz/tips/linux-how-to-setup-as-dns-client.html**
[7] Tata Indicom Broadband Services: **http://www.tataindicom.com/t-personal-internet-wireless-internet.aspx**