Template:Setting up mobile interface on rpi

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Contents

Prerequisites

You will need:

- RPI3 B+ model
- Raspbian 10 operating system
- Internet connection

Step 1: preparing TRM240 for use

Before connecting the TRM240 to the RPI3, we need to prepare the device by inserting the SIM card in place. How to insert the SIM card you can find [here](#). After inserting the card, don't forget to mount the antenna for better GSM signal.

Step 2: connecting to RPI3

When the TRM240 device is ready, we need to connect it to one of the USB ports on the RPI3. After connecting it, wait about 15 seconds for device to boot up. After boot up you should see four new USB ports in the /dev directory. You can check them by executing this command in the terminal:

```
ls /dev/ttyUSB*
```

After executing the command you should see these devices:

We will be using ttyUSB3 port because this port is used for data flow.

Note: If you have connected more USB devices, the USB ports may differ.

Step 3: download necessary software

To start using the TRM240 device, first of all we need to install Debian's Point-to-Point Protocol package. In the terminal execute these commands:

```
sudo apt update
sudo apt install -y ppp
```

This package will be used to establish a dial-up connection which will give us a new network interface called **ppp0**.

Step 4: create necessary scripts

Now we need to create three scripts which will allow us to create the internet connection. In the command line first of all execute these commands:

```
sudo mkdir -p /etc/chatscripts
sudo mkdir -p /etc/ppp/peers
```

When the necessary directories are created, inside the **/etc/chatscripts** directory create file by the name **quectel-chat-connect** and paste in these lines:

```
ABORT "BUSY"
ABORT "NO CARRIER"
ABORT "NO DIALTONE"
ABORT "ERROR"
ABORT "NO ANSWER"
TIMEOUT 30
"" AT
OK ATE0
OK ATI;+CSUB;+CSQ;+COPS?;+CGREG?;&D2
OK AT+CGDCONT=1,\"IP\",\"\\T\",,0,0
OK ATD*99#
CONNECT
```

Lets create another script in the same directory by the name **quectel-chat-disconnect** and paste in these lines:

```
ABORT "ERROR"
ABORT "NO DIALTONE"
SAY "\nSending break to the modem\n"
""   +++
""   +++
""   +++
SAY "\nGoodbay\n"
```

One more script is required inside directory **/etc/ppp/peers**. The script should be called **gprs**. Paste in these lines:

```
/dev/<usb_port> 115200
connect 'chat -s -v -f /etc/chatscripts/quectel-chat-connect -T
<operator_apn>'
disconnect 'chat -s -v -f /etc/chatscripts/quectel-chat-disconnect'
hide-password
noauth
debug
defaultroute
```

```
noipdefault
novj
novjccomp
noccp
ipcp-accept-local
ipcp-accept-remote
local
lock
modem
dump
nodetach
nocrtscts
remotename 3gppp
ipparam 3gppp
ipcp-max-failure 30
usepeerdns
```

Before using this script, you need to change the lines **<usb_port>** and **<operator_apn>**. Usb port must be set to **ttyUSB3** and apn to your **operator's provided apn**.

Step 5: dial-up procedure

This is the last step. Now we need to dial-up the connection. In the terminal execute this command:

```
sudo pppd call gprs&
```

When you execute this command you will see a lot of debug output. Wait until you see the line **"script /etc/ppp/ip-up finished"**.

If you see this line you can check if the connection was created by executing this command in the terminal:

```
ifconfig ppp0
```


If you want to use the created connection as the default gateway, you need to add rule to the routing table. Execute this command in the terminal:

```
sudo route add default gw <your_ip_address> ppp0
```

You can lookup your IP address by executing this command in the terminal:

```
ifconfig ppp0
```


[[Category:{{{name}}} Configuration Examples]]