Internet connectino Watchdog

this is about creating a raspberry pi based appliance that monitors your internet conenction and if it goes down, automatically debugs it and restarts stuff like modem / router etc. as necessary. the device should also be reachable via an on-demand gsm link that can be initated by sms to login to the device and debug the link manually

so far, this is just a collection of snippets of information and links, i'll write it up into a nice article one day, but not today ;)

software installation

```
apt update && apt install wvdial gammu gammu-smsd picocom
```

SMS

- Software: Gammu
- Hardware: TP-Link MA260
- on the tp-link stick the last serial device seems to be the one that can be used for sms (`gammu identify` only gets information from that device).

  ```
  gammu-detect | grep -B1 TP-LINK | grep ttyUSB | tail -n 1
  ```

  to get the device name for the config

- installation:

  ```
  apt install gammu gammu-smsd
  ```

- process-sms.sh

  ```
  #!/bin/bash
  for i in `seq $SMS_MESSAGES` ; do
      $numvar="SMS_${i}_NUMBER"
      $textvar="SMS_${i}_TEXT";
      echo "${!numvar}:${!textvar}" >> /tmp/messages
      if [ "${!textvar}" == "connect ]; then
        echo "connect!" >> /tmp/messages
      fi
  done
  ```

GSM Link

- Hardware: See above
- Software: wvdial
- config: `/etc/wvdial.conf`

```
[Dialer Defaults]
Init1 = ATZ
Init2 = ATQ0 V1 E1 S0=0 &C1 &D2 +FCLASS=0
Init3 = AT+CGDCONT=1,"IP","internet"
Modem Type = Analog Modem
Baud = 9600
New PPPD = yes
Modem = /dev/ttyUSB5
ISDN = 0
Phone = *99#
Password = { }
Username = { }
```

Relay Card

- Hardware: Conrad electronics, part number 967720 (Relaiskarte 8Fach Seriell)
- Software: http://www.thomas-dohl.de/?Projekte__Relaiskarte

serial console to router

- via dual prolific basead usb to serial converter, one link goes to the relay card, the other to the serial terminal of the pfsense router.
- usb link is extended down to the basement via cat7 link, I simply cut a usb extension cord into two and attached RJ45 plugs to both ends with identical pin layout. works like a charm :)
- software: `picocom`

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