**Modbus-cli installation guide**

**(for OpenWrt 18.06)**

[1 Prepare router](#Prepare)

[1.1 Allow ssh access](#Allow)

[1.2 Install libmodbus](#Install)

[2 Prepare Build Machine](#Prepare2)

[2.1 Download and run preconfigured virtual machine](#Download)

[2.2 Configure Build](#Configure)

[2.3 Build modbus-cli for tp-link wr842n](#wr842n)

[2.4 Build modbus-cli for another router](#another)

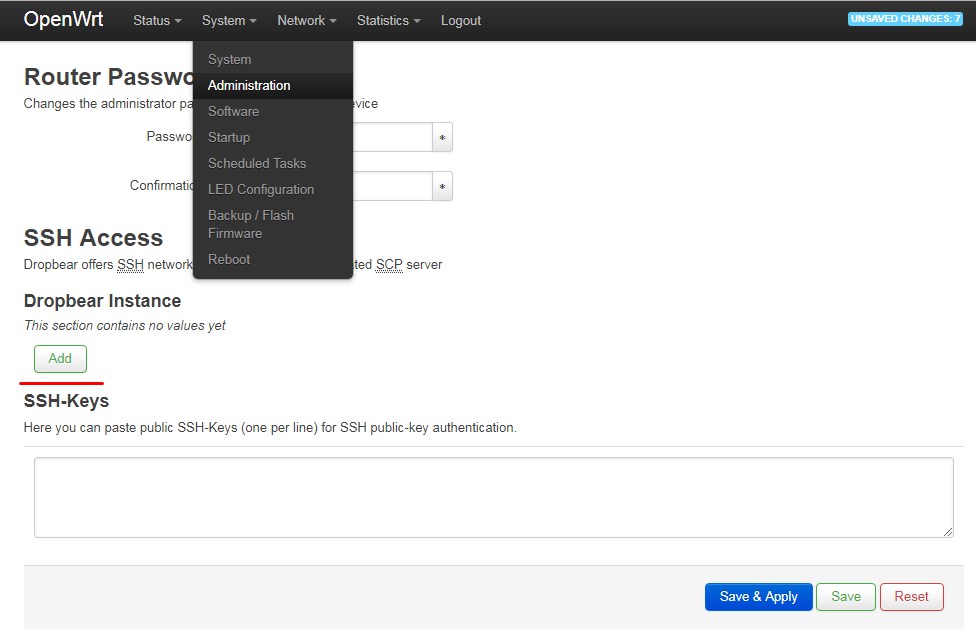
[3 Installing modbus-cli\*.ipk package](#modbus)

[4 Additional information](#Additional)

**1** **Prepare router**

Log in to your router with OpenWrt firmware via GUI.

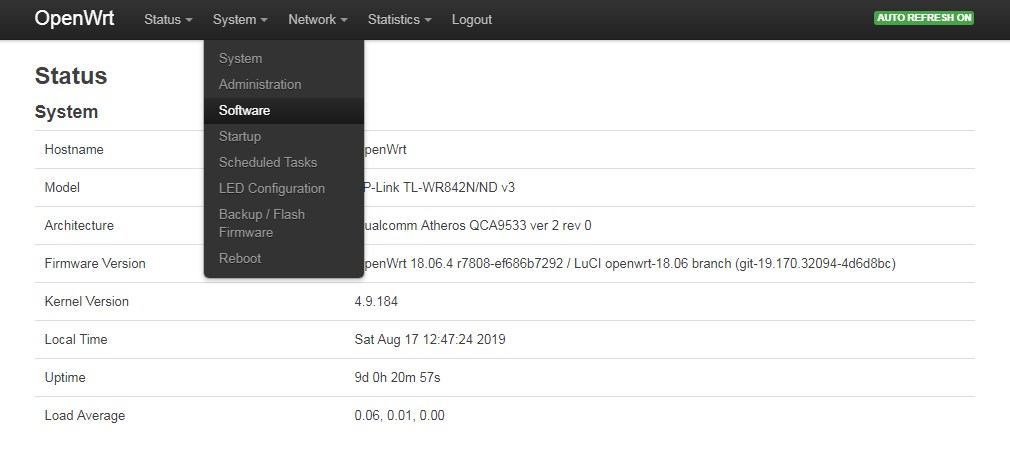
**1.1** **Allow ssh access**

Chose System -> Administration, under SSH Access press "Add" button 

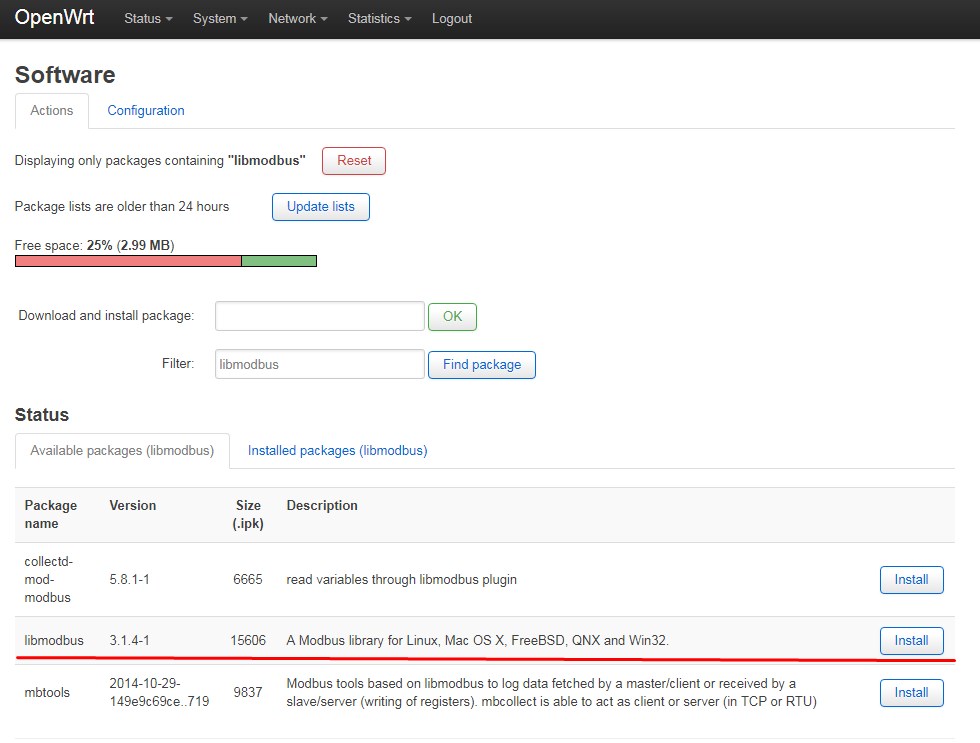
Press "Save & Apply" button.

**1.2** **Install libmodbus**

Chose System -> Software



Type in Filter field "libmodbus".

Find "libmodbus" package and press "Install" 

**2 Prepare Build Machine**

**2.1 Download and run preconfigured virtual machine**

Download and install file openwrt1.ova (tested on VirtualBox 6.0)

<https://1drv.ms/u/s!AgIdb_KOIKCEaAzKrdQNdMf-fco?e=dJ5kv8>

Run machine

Login: openwrt

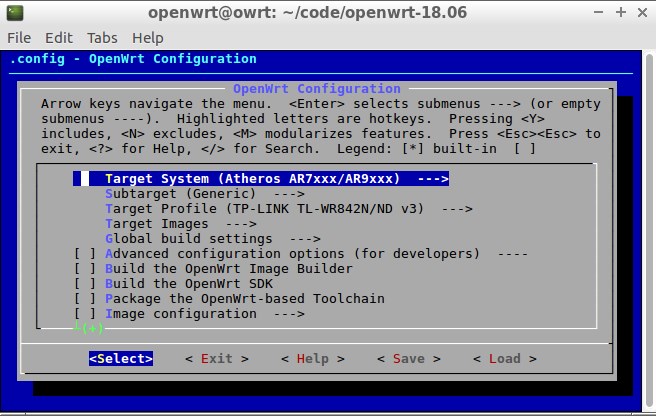
Pass: 12345678

**2.2** **Configure Build**

Open terminal (CTRL + ALT + T) and make command

*cd /home/openwrt/code/openwrt-18.06*

*make menuconfig*



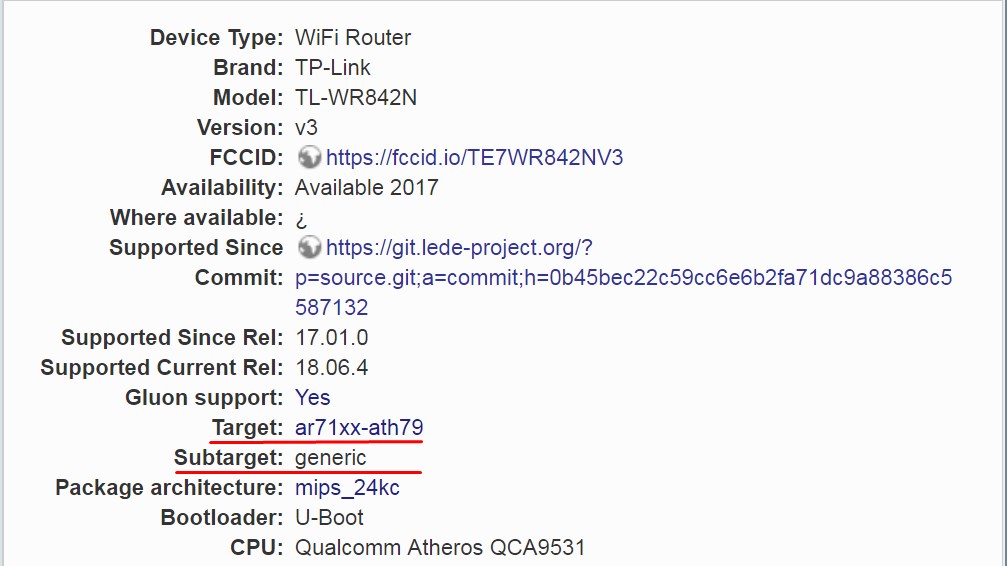
Chose your router specific "Target System", "Subtarget", "Target Profile"

You can find them on:

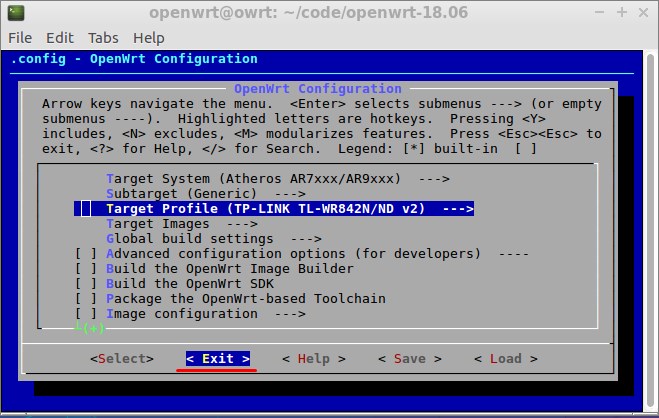
<https://openwrt.org/toh/hwdata/start>

For example tp-link wr-842n v3

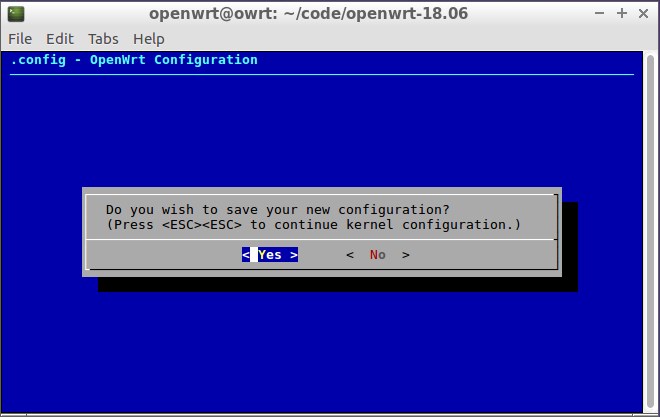
<https://openwrt.org/toh/hwdata/tp-link/tp-link_tl-wr842n_v3>



Press arrow right, chose "Exit"



Chose "Yes"



Now you can build application.

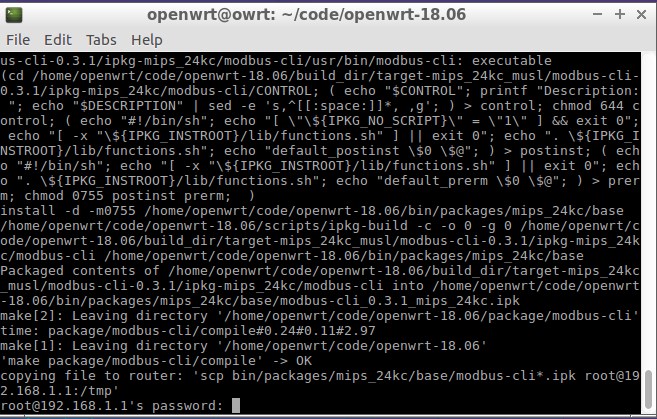
**2.3 Build modbus-cli for tp-link wr842n**

Run in terminal

*cd /home/openwrt/code/openwrt-18.06*

/home/openwrt/code/openwrt-18.06/package/modbus-cli/make-script.sh

If your router IP 192.168.1.1 make script allow you to upload modbus-cli\*.ipk via SSH directly to your router /tmp location. Just enter your SSH password.



Otherwise, you can find file modbus-cli\_0.3.1\_mips\_24kc.ipk in

/home/openwrt/code/openwrt-18.06/bin/packages/mips\_24kc/base

Upload it to your router /tmp location manually.

**2.4 Build modbus-cli for another router**

Run in terminal

cd /home/openwrt/code/openwrt-18.06

make package/modbus-cli/clean V=s

make package/modbus-cli/compile V=s

If there is no error, file modbus-cli\*.ipk appear in your target specific location /home/openwrt/code/openwrt-18.06/bin/packages/YOUR\_TARGET\_NAME/base

Copy this file to your router /tmp location

**3 Installing modbus-cli\*.ipk package**

Log In to your router with OpenWrt firmware via SSH

type

cd /tmp

check file presence with command

ls -l /tmp/modbus-cli\*

Install the package:

opkg install /tmp/modbus-cli\*.ipk

Verify installation

modbus-cli -h

**Additional information:**

modbus-cli installation on OpenWrt Barrier Breaker

<https://www.maestro-wireless.eu/kb/modbus-cli-package/>