

## Sub Station Router

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## Intro

### **Goal**

Create a OpenWRT Sub Station.

The Router is a WLAN Client and contains a WireGuard Server.

On the Switch Network Outputs can be a SubProject

### **Hardware**

TP-Link TL-WDR4300 Ver. 1.7

TP-Link TL-WDR3600 Ver. 1.5

### **Software**

OpenWRT 22.03.5

## Basic Setup

### ***LuCi***

System->System:

Hostname: WDR3600 WDR4300

Timezone:Europe/Berlin

System->Administration

ChangePassword (Without no ssh) (b...k)

Network->Wireless:

Delete all SSID Masters

Add 5Ghz Client

Advanced Setting:DE

Network->Interfaces

->lan

Change Ipv4 Address

Save & Apply (Requires re-connect)

ipconfig /renew

## Wireguard

### ***Add Software***

Befor Running scripts the Wireguard Software must be installed

System->Software

->Filter: wireguard / Update Lists

Install: luci-app-wireguard

Automatic add installed:

wireguard-tools

kmod-wireguard

luci-i18n-wireguard-en

luci-proto-wireguard

Install: qrencode

Automatic add installed:

libqrencode

### ***Reboot Device***

**Create script from Template:**

<https://openwrt.org/docs/guide-user/services/vpn/wireguard/automated>

Change Defines in Head of script (separate for each device)

```
export interface="192.168.36"
export interface="192.168.43" # overlapping with lan subnet
export DDNS="abcd1234abcd1234.myfritz.net"
export peer_IP="51"
export WG_${LAN}_server_port="36996"
export WG_${LAN}_server_port="43996"
export WG_${LAN}_server_IP="${interface}.2" # from 1 to 2; d'ont overlap router
export user_1="jisoo"
export user_2="jennie"
export user_3="rose"
export user_4="lisa"
export user_1="karina"
export user_2="giselle"
export user_3="winter"
export user_4="ningning"
```

Copy Script into root account

```
scp auto_wg_XX_username-id.sh root@192.168.43.1:~
```

ssh into router

```
ssh root@192.168.43.1
```

Execute in router

```
chmod +x auto_wg_XX_username-id.sh
./auto_wg_XX_username-id.sh
```

after script run

Readback Client scripts

```
scp -r root@192.168.XX.1:/etc/wireguard/** readbackXX/
pause ***** XXXXXXXXXXXX *****
```

**Post Processing**

Modify the Peer config rfiles after extraction

[Interface]

Address = X.X.X.X/24 # get Subnet 255.255.255.0  
 DNS = 192.168.36.1 # change from 2 to 1 for router dns

[Peer]  
 # everything goes through the tunnel  
 AllowedIPs = 0.0.0.0/0, ::/0  
 # only the connected subnet is behind the tunnel  
 AllowedIPs = 192.168.XX.0/24  
 # ??? is this true ???

## Outside Router Setup

Wireguard Port forwarding (Weiterleitung)

## Setup differences per device

Device	Hostname	Lan Subnet	Port Wireguard	Clients	XXXXXXX
WDR3600	WDR3600	192.168.36.1/24	36996	Jisoo Jennie Rose Lisa	
WDR4300	WDR4300	192.168.43.1/24	43996	Karina Giselle Winter Ningning	
Fritz 7490			58989	IU	

## Links

### ***main***

<https://openwrt.org/docs/guide-user/services/vpn/start>

<https://openwrt.org/docs/guide-user/services/vpn/wireguard/start>

<https://openwrt.org/docs/guide-user/services/vpn/wireguard/automated>

### ***full config generator***

<https://www.wireguardconfig.com/>

### ***qrcode generation from config file***

<https://www.wireguardconfig.com/qrcode>

### ***other***

<https://github.com/nyr>

<https://wiki.securepoint.de/UTM/VPN/%C3%9Cbersicht>

<https://www.youtube.com/watch?v=FnvP7dOmy9w&t=181s>

<https://www.apfeltalk.de/community/threads/os-x-ssh-remote-loesungen-unter-osx-dazu-vnc-kvm.35714/>

<https://openwrt.org/docs/guide-user/services/vpn/openvpn/client-luci>

### ***very other***

<https://sekurak.pl/more-information-about-tp-link-backdoor/>

<https://sekurak.pl/tp-link-httpftp-backdoor/>