

Настройка VPN-сервера Wireguard

1. Установка Wireguard и дополнительных пакетов

```
root@vm335185:~# sudo apt install wireguard-tools mawk grep iproute2 qrencode
Reading package lists... Done
Building dependency tree
Reading state information... Done
grep is already the newest version (3.4-1).
4 1.0.20200513-1~20.04.2 [83.3 kB]
Fetched 131 kB in 0s (622 kB/s)
Selecting previously unselected package libqrencode4:amd64.
(Reading database ... 105426 files and directories currently installed.)
Preparing to unpack .../libqrencode4_4.0.2-2_amd64.deb ...
Unpacking libqrencode4:amd64 (4.0.2-2) ...
Selecting previously unselected package qrencode.
Preparing to unpack .../qrencode_4.0.2-2_amd64.deb ...
Unpacking qrencode (4.0.2-2) ...
Selecting previously unselected package wireguard-tools.
Preparing to unpack .../wireguard-tools_1.0.20200513-1~20.04.2_amd64.deb ...
Unpacking wireguard-tools (1.0.20200513-1~20.04.2) ...
Setting up libqrencode4:amd64 (4.0.2-2) ...
Setting up qrencode (4.0.2-2) ...
Setting up wireguard-tools (1.0.20200513-1~20.04.2) ...
wg-quick.target is a disabled or a static unit, not starting it.
```

2. Загрузка скрипта easy-wg-quick (<https://github.com/burghardt/easy-wg-quick>)

```
Setting up qrencode (4.0.2-2) ...
Setting up wireguard-tools (1.0.20200513-1~20.04.2) ...
wg-quick.target is a disabled or a static unit, not starting it.
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.2) ...
root@vm335185:~# wget https://raw.githubusercontent.com/burghardt/easy-wg-quick/master/easy-wg-quick
--2022-06-14 01:17:40-- https://raw.githubusercontent.com/burghardt/easy-wg-quick/master/easy-wg-quick
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.111.133, 185.199.109.133, 185.199.108.133, ...
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.111.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 16956 (17K) [text/plain]
Saving to: 'easy-wg-quick'

easy-wg-quick      100%[=====] 16.56K  --.-KB/s   in 0.01s

2022-06-14 01:17:40 (1.40 MB/s) - 'easy-wg-quick' saved [16956/16956]
```

3. Установка разрешения на запуск файла

```
root@vm335185: ~  
wg-quick.target is a disabled or a static unit, not starting it.  
Processing triggers for man-db (2.9.1-1) ...  
Processing triggers for libc-bin (2.31-0ubuntu9.2) ...  
root@vm335185:~# wget https://raw.githubusercontent.com/burghardt/easy-wg-quick/master/easy-wg-quick  
--2022-06-14 01:17:40-- https://raw.githubusercontent.com/burghardt/easy-wg-quick/master/easy-wg-quick  
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.111.133, 185.199.109.133, 185.199.108.133, ...  
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.111.133|:443... connected.  
HTTP request sent, awaiting response... 200 OK  
Length: 16956 (17K) [text/plain]  
Saving to: 'easy-wg-quick'  
  
easy-wg-quick      100%[=====] 16.56K  --.-KB/s   in 0.01s  
  
2022-06-14 01:17:40 (1.40 MB/s) - 'easy-wg-quick' saved [16956/16956]  
  
root@vm335185:~# chmod +x easy-wg-quick  
root@vm335185:~#
```

4. Запуск easy-wg-quick

```
root@vm335185: ~  
root@vm335185:~# ./easy-wg-quick  
No extnetif.txt... creating one!  
No extnetip.txt... creating one!  
No intnetmtu.txt... creating one!  
No intnetmask.txt... creating one!  
No intnetdns.txt... creating one!  
No intnetaddress.txt... creating one!  
No intnetallowedips.txt... creating one!  
No fwtype.txt... creating one!  
No sysctltype.txt... creating one!  
Looks like you have IPv6 available. Enabling IPv6 in tunnels!  
No ipv6mode.txt... creating one!  
No intnet6mask.txt... creating one!  
No intnet6dns.txt... creating one!  
No intnet6address.txt... creating one!  
No seqno.txt... creating one!  
No portno.txt... creating one!  
No wghub.key... creating one!  
No wghub.conf... creating one!  
Wireguard hub address is 194.87.49.19:13077 on eth0.  
Note: customize [Interface] section of wghub.conf if required!
```

```
root@vm335185: ~  
  
Scan QR code with your phone or use "wgclient_10.conf" file.  
Updating wghub.conf... done!  
  
Important: Deploy updated wghub.conf configuration to wireguard with wg-quick:  
  sudo wg-quick down ./wghub.conf # if already configured  
  sudo wg-quick up ./wghub.conf  
  sudo wg show # to check status  
root@vm335185:~# |
```

5. Включение службы wg-quick@wghub

```
root@vm335185:~# sudo cp wghub.conf /etc/wireguard/wghub.conf  
root@vm335185:~# sudo systemctl enable wg-quick@wghub  
Created symlink /etc/systemd/system/multi-user.target.wants/wg-quick@wghub.service → /  
lib/systemd/system/wg-quick@.service.  
root@vm335185:~# sudo systemctl start wg-quick@wghub  
root@vm335185:~# |
```

6. Просмотр состояния службы

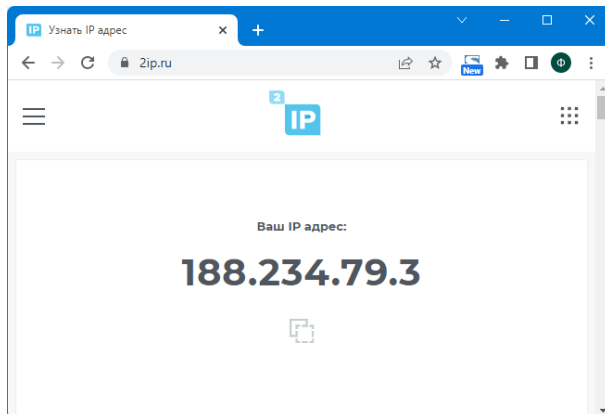
```
root@vm335185: ~  
● wg-quick@wghub.service - WireGuard via wg-quick(8) for wghub  
   Loaded: loaded (/lib/systemd/system/wg-quick@.service; enabled; vendor preset: e  
   Active: active (exited) since Tue 2022-06-14 01:20:50 MSK; 1min 2s ago  
     Docs: man:wg-quick(8)  
           man:wg(8)  
           https://www.wireguard.com/  
           https://www.wireguard.com/quickstart/  
           https://git.zx2c4.com/wireguard-tools/about/src/man/wg-quick.8  
           https://git.zx2c4.com/wireguard-tools/about/src/man/wg.8  
  Process: 37224 ExecStart=/usr/bin/wg-quick up wghub (code=exited, status=0/SUCCESS)  
 Main PID: 37224 (code=exited, status=0/SUCCESS)  
  
Jun 14 01:20:49 vm335185 wg-quick[37224]: [#] ip link set mtu 1280 up dev wghub  
Jun 14 01:20:49 vm335185 wg-quick[37224]: [#] iptables -t mangle -A POSTROUTING -p tcp  
Jun 14 01:20:49 vm335185 wg-quick[37224]: [#] ip6tables -t mangle -A POSTROUTING -p tcp  
Jun 14 01:20:49 vm335185 wg-quick[37224]: [#] iptables -t nat -A POSTROUTING -o eth0  
Jun 14 01:20:49 vm335185 wg-quick[37224]: [#] iptables -A FORWARD -i wghub -j ACCEPT  
Jun 14 01:20:49 vm335185 wg-quick[37224]: [#] ip6tables -A FORWARD -i wghub -j ACCEPT  
Jun 14 01:20:49 vm335185 wg-quick[37224]: [#] ip6tables -t nat -A POSTROUTING -o eth0  
Jun 14 01:20:50 vm335185 wg-quick[37224]: [#] sysctl -q -w net.ipv4.ip_forward=1  
lines 1-20
```

7. Файл конфигурации клиента wgclient_10.conf был загружен с помощью WinSCP.

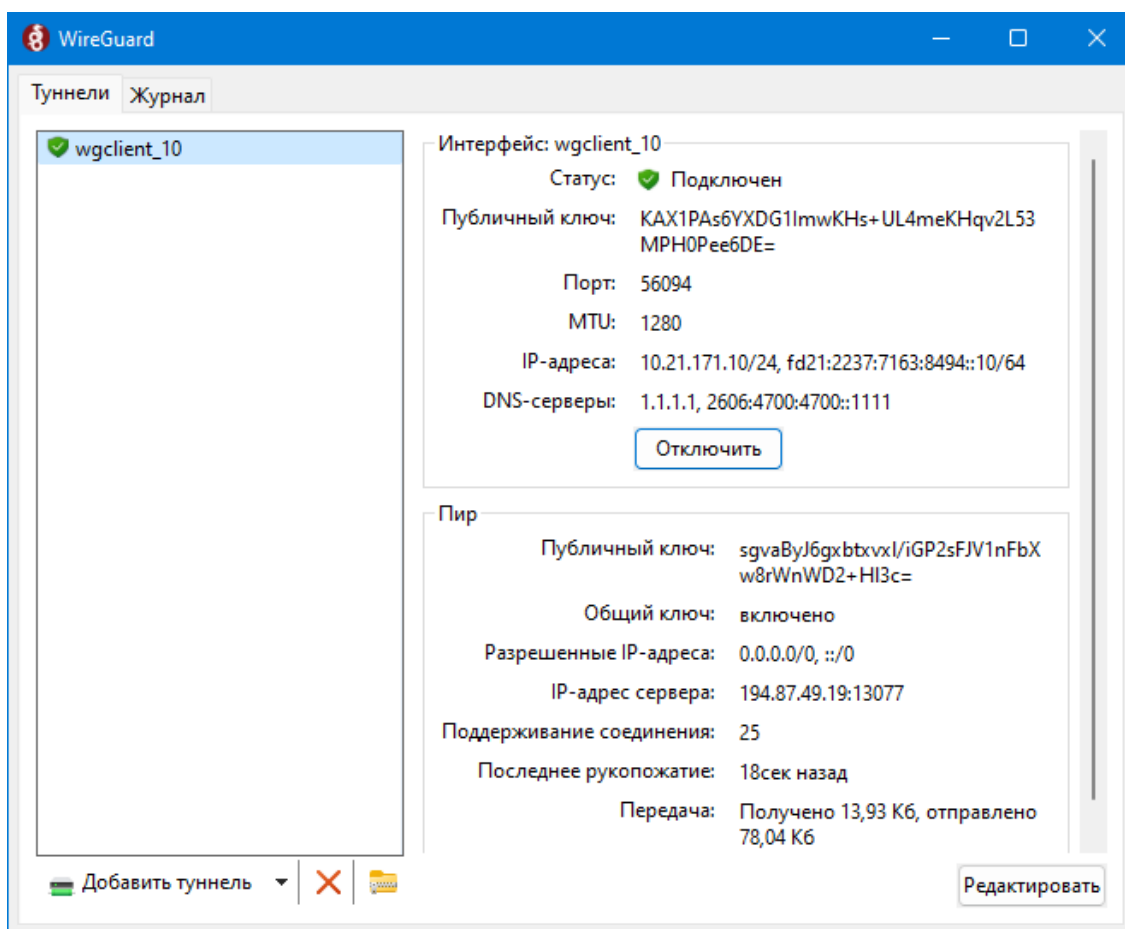
```
File Edit Selection View ... wgclient_10.conf - ...  
C: > Users > Fyodor > Desktop > wgclient_10.conf  
1 # 10: 10 > wgclient_10.conf  
2 [Interface]  
3 Address = 10.21.171.10/24, fd21:2237:7163:8494::10/64  
4 DNS = 1.1.1.1, 2606:4700:4700::1111  
5 PrivateKey = CEv157Js8s9G1NdaNyFIIsuRgwyoyxE/ZxKIgOYtWfo=  
6 MTU = 1280  
7  
8 [Peer]  
9 PublicKey = sgvaByJ6gxbtxvxl/iGP2sFJV1nFbXw8rWnWD2+Hl3c=  
10 PresharedKey = aS4B0rGVPSWXNxIncYiUTP9DDPVCp2BBb1wlHMIqGso=  
11 AllowedIPs = 0.0.0.0/0, ::/0  
12 Endpoint = 194.87.49.19:13077  
13 PersistentKeepalive = 25  
14  
Ln 1, Col 1 Spaces: 4 UTF-8 LF Properties
```

8. Установка клиента Wireguard

9. Просмотр текущего IP-адреса



10. Подключение к серверу



10. Соединение осуществляется через VPN-сервер

