

**1. Настроить статическую конфигурацию (без DHCP) в Ubuntu через ip и netplan.  
Настроить IP, маршрут по умолчанию и DNS-сервера (1.1.1.1 и 8.8.8.8).  
Проверить работоспособность сети.**

```
ermolov@test:~$ sudo ip addr add 192.168.1.251 broadcast 192.168.1.255 dev enp1s0
```

```
ermolov@test:~$ ip a
```

```
2: enp1s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
```

```
link/ether 52:54:00:b0:f8:fc brd ff:ff:ff:ff:ff:ff
```

```
inet 192.168.1.104/24 metric 100 brd 192.168.1.255 scope global dynamic enp1s0
```

```
valid_lft 142942sec preferred_lft 142942sec
```

```
inet 192.168.1.251/32 brd 192.168.1.255 scope global enp1s0
```

```
valid_lft forever preferred_lft forever
```

```
ermolov@test:~$ sudo ip route add default via 192.168.1.100 dev enp1s0
```

```
ermolov@test:~$ ip r
```

```
default via 192.168.1.100 dev enp1s0
```

```
default via 192.168.1.1 dev enp1s0 proto dhcp src 192.168.1.104 metric 100
```

```
ermolov@test:~$ cd /etc/netplan/
```

```
ermolov@test:/etc/netplan$ sudo cp 50-cloud-init.yaml 50-cloud-init.yaml.bak
```

```
ermolov@test:/etc/netplan$ sudo nano 50-cloud-init.yaml
```

```
network:
```

```
  ethernets:
```

```
    enp1s0:
```

```
      dhcp4: no
```

```
      addresses: [192.168.1.104/24]
```

```
      routes:
```

```
        - to: default
```

```
          via: 192.168.1.1
```

```
      nameservers:
```

```
        addresses:
```

```
          - 8.8.8.8
```

```
          - 1.1.1.1
```

```
version: 2
```

```
ermolov@test:/etc/netplan$ sudo netplan try
```

Do you want to keep these settings?

Press ENTER before the timeout to accept the new configuration

Changes will revert in 111 seconds

Configuration accepted.

```
ermolov@test:/etc/netplan$ ping google.com
```

PING google.com (216.58.211.238) 56(84) bytes of data.

64 bytes from mad07s20-in-f14.1e100.net (216.58.211.238): icmp\_seq=1 ttl=115 time=52.6 ms

64 bytes from mad07s20-in-f14.1e100.net (216.58.211.238): icmp\_seq=2 ttl=115 time=52.2 ms

## **2. Настроить правила iptables для доступности сервисов на TCP-портах 22, 80 и 443. Также сервер должен иметь возможность устанавливать подключения к серверу обновлений.**

**Остальные подключения запретить.**

Запретить любой входящий трафик с IP 3.4.5.6.

- \* Запросы на порт 8090 перенаправлять на порт 80 (на этом же сервере).
- \* Разрешить подключение по SSH только из сети 192.168.1.0/24.

```
ermolov@test:~$ sudo iptables -A INPUT -p tcp --dport=22 -j ACCEPT
```

```
ermolov@test:~$ sudo iptables -A INPUT -p tcp --dport=80 -j ACCEPT
```

```
ermolov@test:~$ sudo iptables -A INPUT -p tcp --dport=443 -j ACCEPT
```

```
ermolov@test:~$ sudo iptables -A INPUT -i lo -j ACCEPT
```

```
ermolov@test:~$ sudo iptables -A INPUT -m state --state ESTABLISHED,RELATED -j ACCEPT
```

```
ermolov@test:~$ sudo iptables -P INPUT DROP
```

```
ermolov@test:~$ sudo iptables -A INPUT -s 3.4.5.6 -j DROP
```

```
ermolov@test:~$ sudo iptables -t nat -I PREROUTING -p tcp --dport 8090 -j REDIRECT --to-port 80
```

```
ermolov@test:~$ sudo iptables -A INPUT -p tcp --dport 22 -s 192.168.1.0/24 -m conntrack --ctstate NEW,ESTABLISHED -j ACCEPT
```

```
ermolov@test:~$ sudo iptables-save > ip.rules
```

```
ermolov@test:~$ nano ip.rules
```

```
# Generated by iptables-save v1.8.10 (nf_tables) on Wed Jul 31 18:47:17 2024
```

```
*filter
```

```
:INPUT DROP [381:22496]
```

```
:FORWARD ACCEPT [0:0]
```

```
:OUTPUT ACCEPT [0:0]
```

```
-A INPUT -p tcp -m tcp --dport 22 -j ACCEPT
```

```
-A INPUT -p tcp -m tcp --dport 80 -j ACCEPT
```

```
-A INPUT -p tcp -m tcp --dport 443 -j ACCEPT
```

```
-A INPUT -i lo -j ACCEPT
```

```
-A INPUT -m state --state RELATED,ESTABLISHED -j ACCEPT
```

```
-A INPUT -s 3.4.5.6/32 -j DROP
```

```
-A INPUT -s 192.168.1.0/24 -p tcp -m tcp --dport 22 -m conntrack --ctstate NEW,ESTABLISHED -j ACCEPT
```

```
COMMIT
```

```
# Completed on Wed Jul 31 18:47:17 2024
```

```
# Generated by iptables-save v1.8.10 (nf_tables) on Wed Jul 31 18:47:17 2024
```

```
*nat
```

```
:PREROUTING ACCEPT [314:18992]
```

```
:INPUT ACCEPT [0:0]
```

```
:OUTPUT ACCEPT [0:0]
```

```
:POSTROUTING ACCEPT [0:0]
```

```
-A PREROUTING -p tcp -m tcp --dport 8090 -j REDIRECT --to-ports 80
```

```
COMMIT
```

```
# Completed on Wed Jul 31 18:47:17 2024
```