Hướng dẫn cài đặt và sử dụng PIVPN

1. Hướng dẫn cài đặt

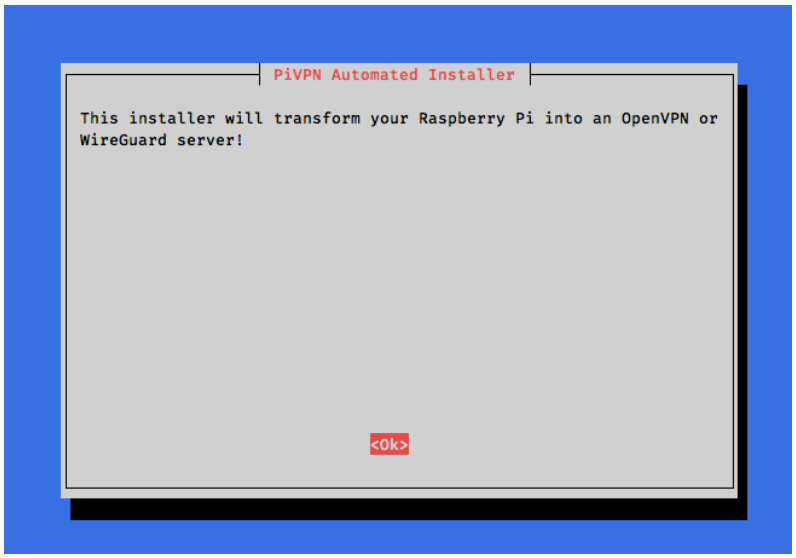
a. Chuẩn bị

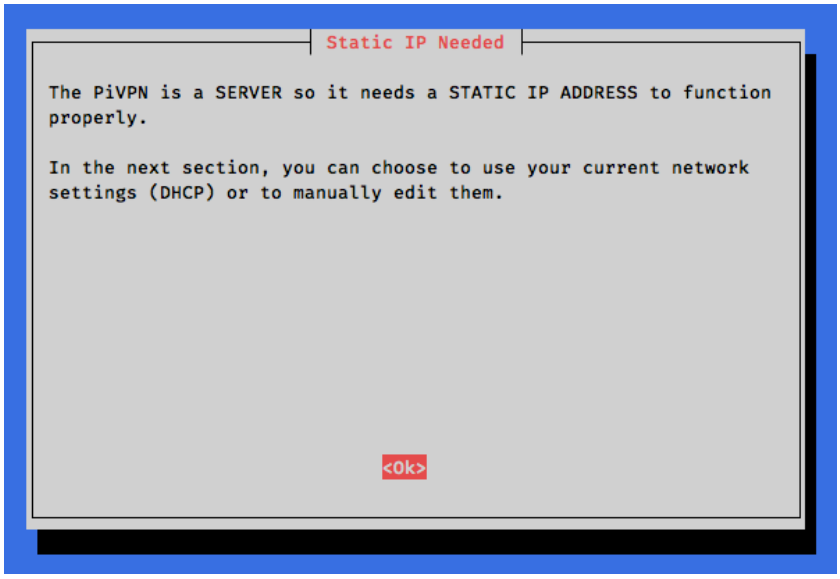
- Server Pi3 cài Rasbian Lite hoặc Ubuntu
- Kết nối internet
- 1 domain hoặc 1 IP cố định
- Cài OpenSSH Server để ssh vào
- Đảm bảo cài đặt sẵn **curl**

b. Cài đặt

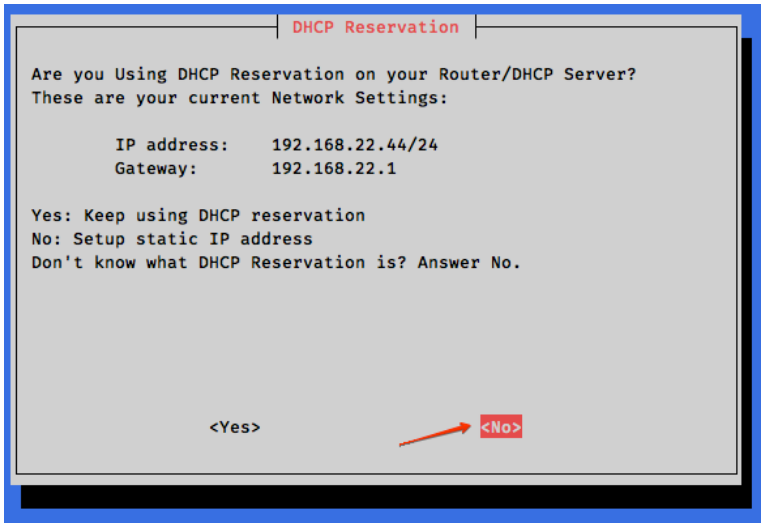
Script cài đặt tự động và code lưu tại:
https://github.com/baonq243/pivpn.git
Để chạy script: sudo vào quyền root và chạy command sau:
curl https://raw.githubusercontent.com/baonq243/pivpn/main/auto_install/install.sh | bash

Quá trình cài đặt sẽ qua các bước sau:

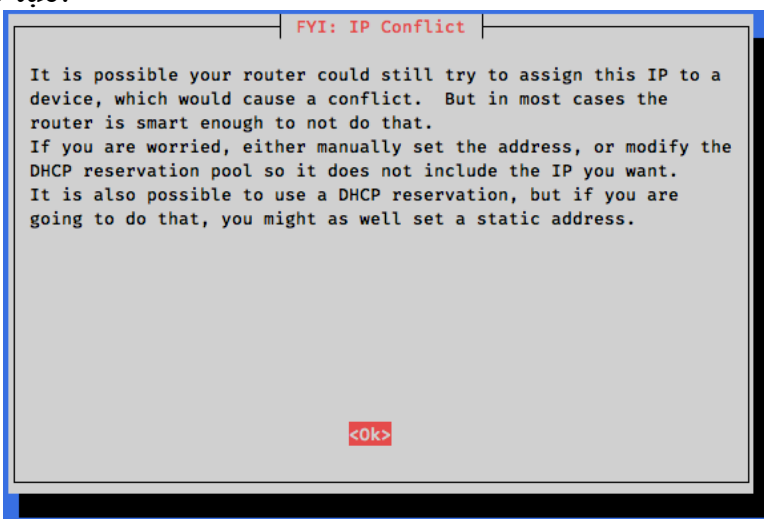


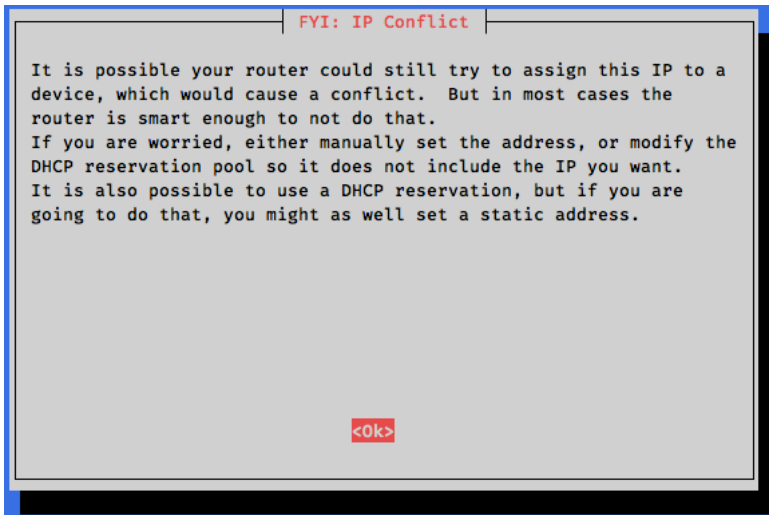


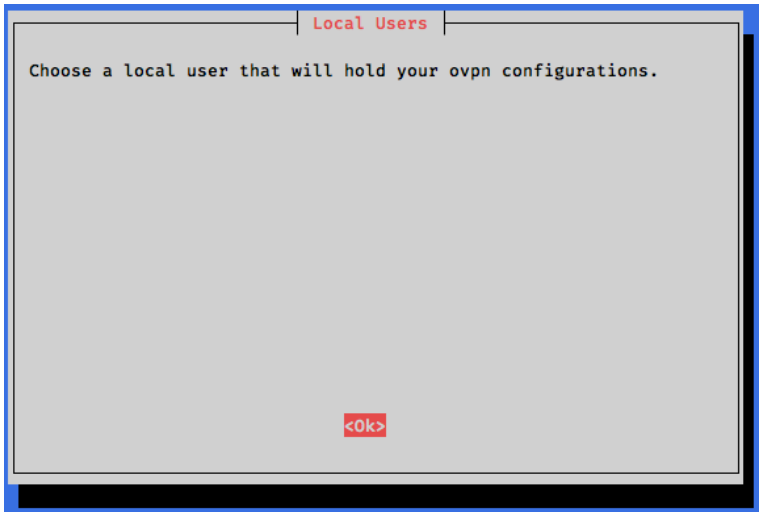
Chọn No để cài đặt IP static:



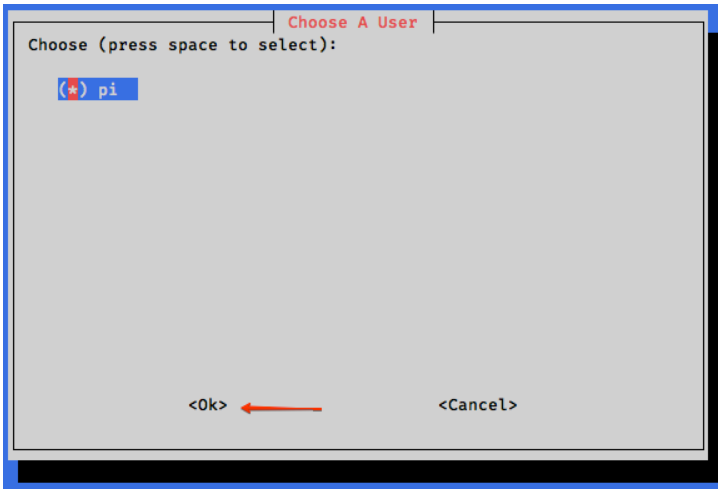
Chọn Ok để tiếp tục:



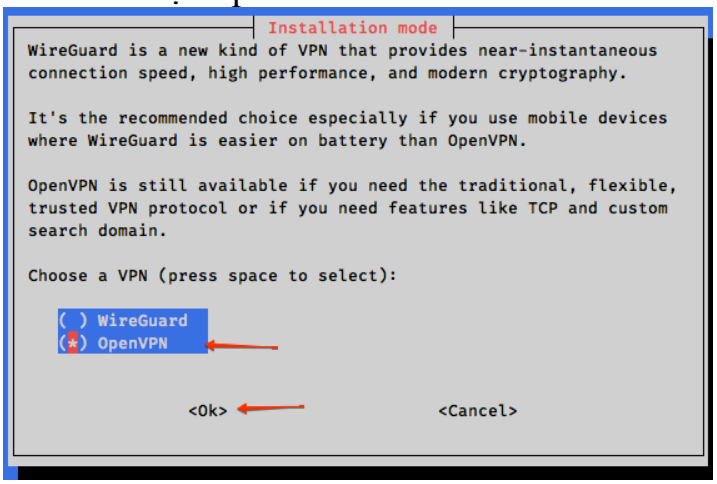




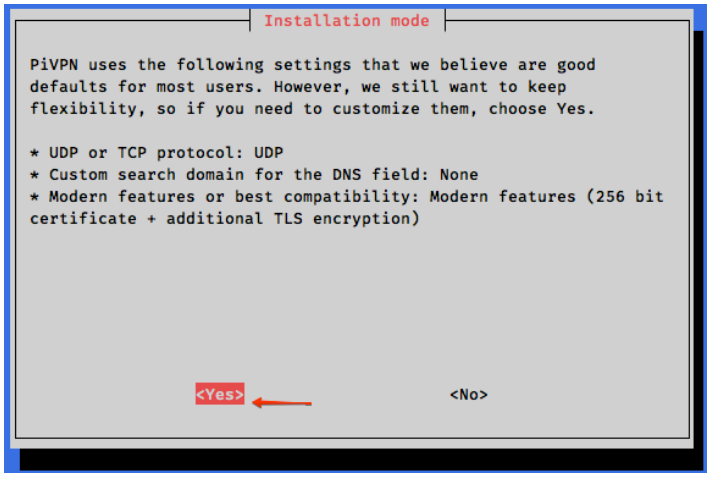
Chọn User OS:



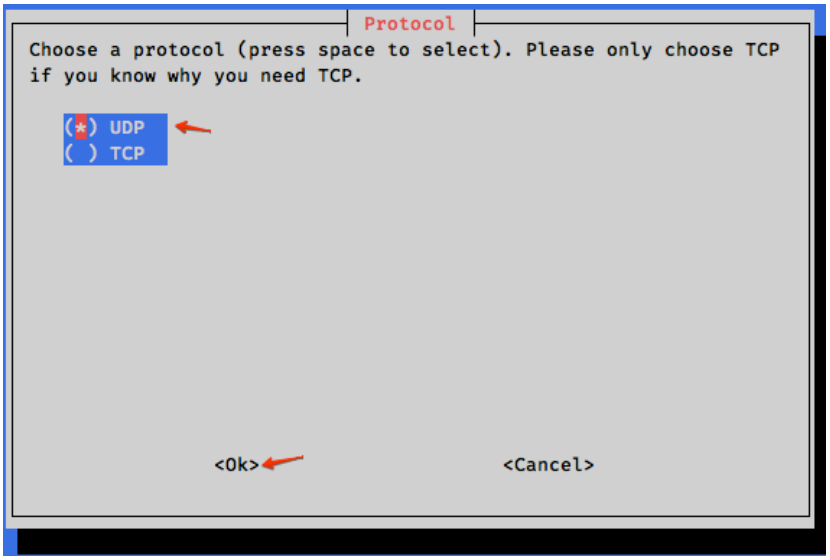
Chọn OpenVPN để vào cài đặt OpenVPN



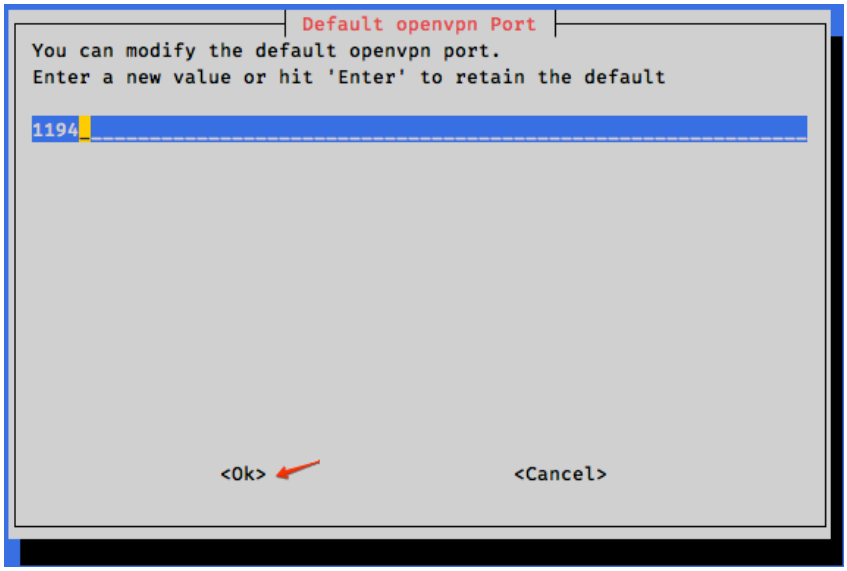
Chọn Yes để vào chế độ Custom



Chọn phương thức kết nối: UDP

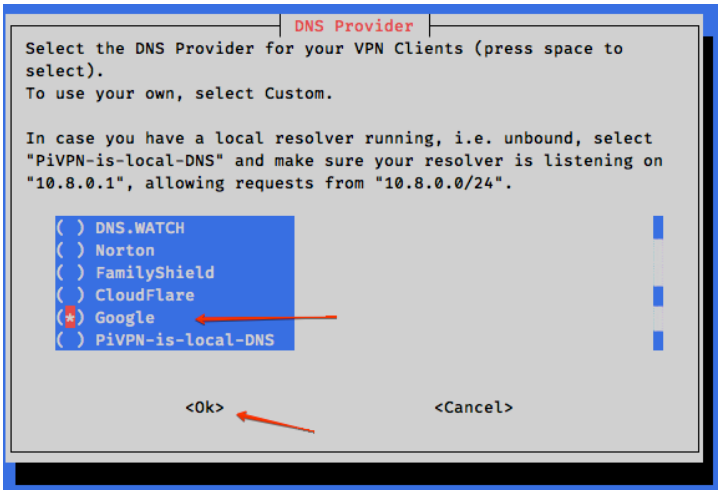


Port listen mặc định 1194: có thể thay đổi

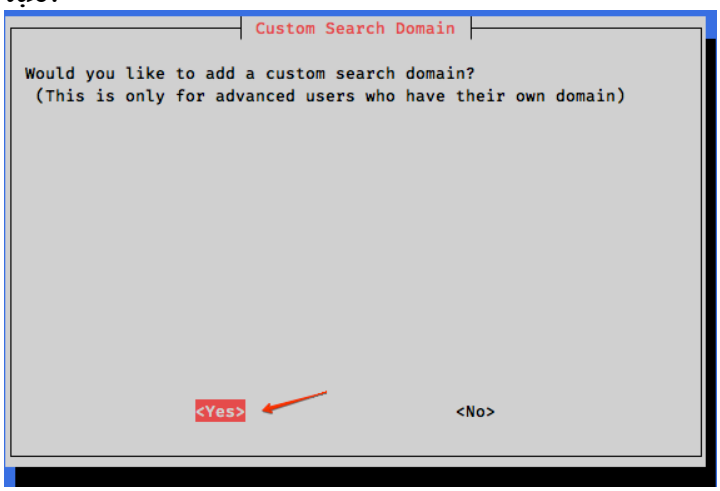


Chọn Yes để xác nhận

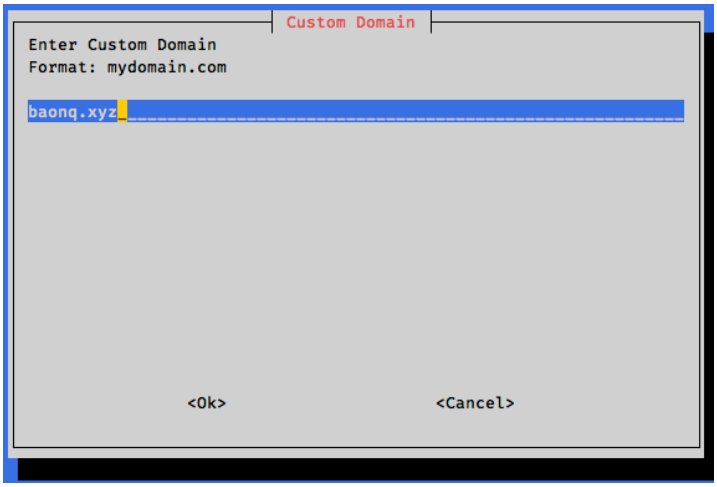
Chọn DNS server gửi xuống clients: 8.8.8.8

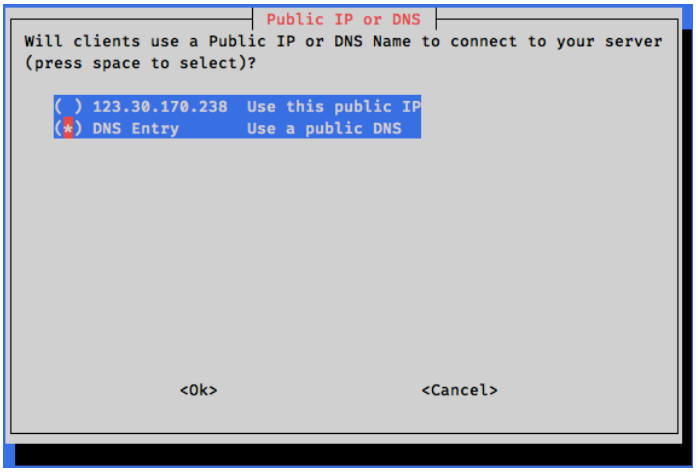


Chọn Yes để tiếp tục:

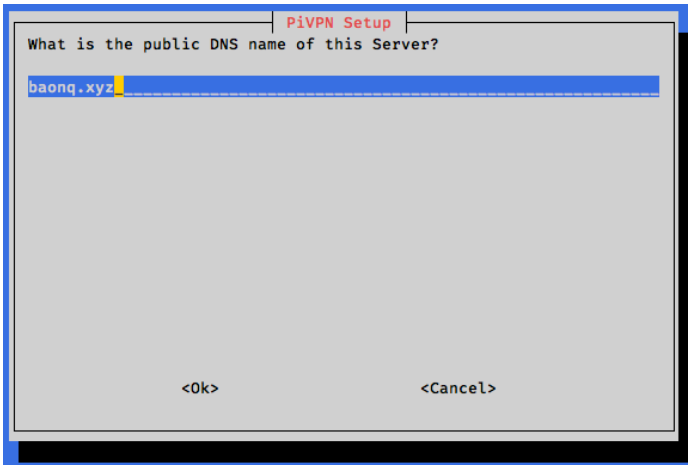


Điền domain client sẽ kết nối tới:

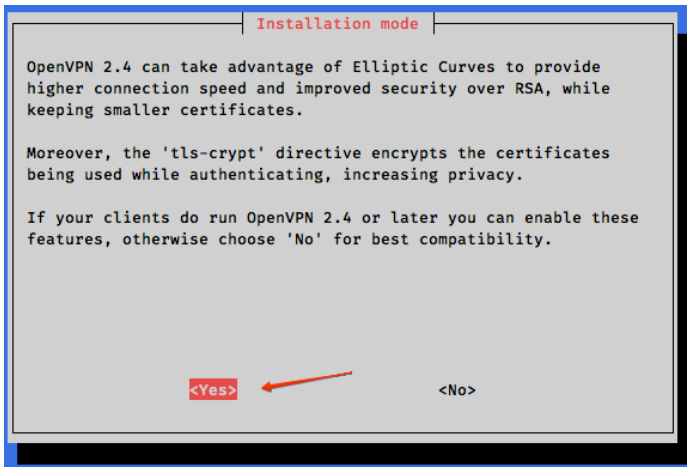




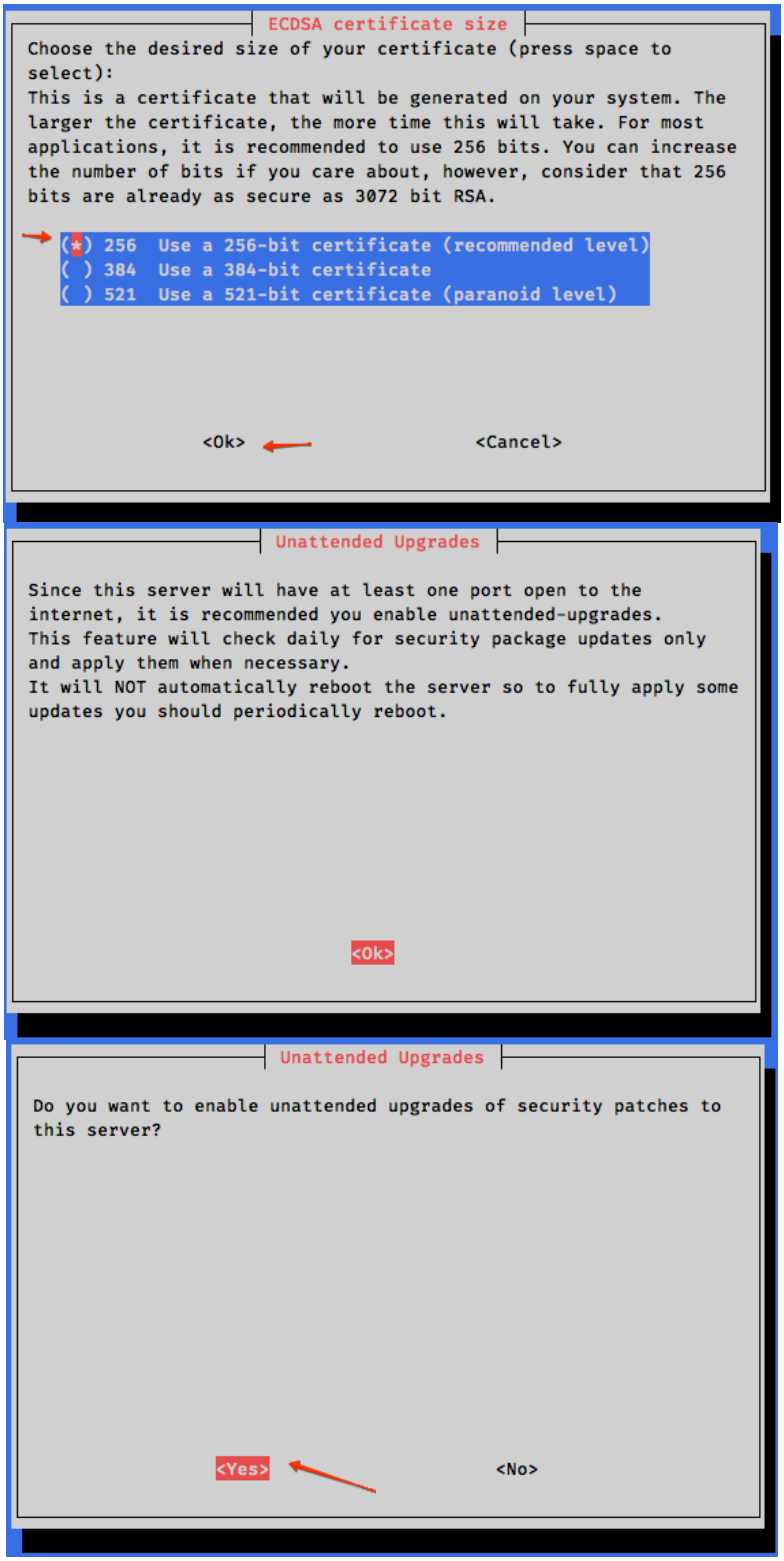
Điền domain client sẽ kết nối tới:



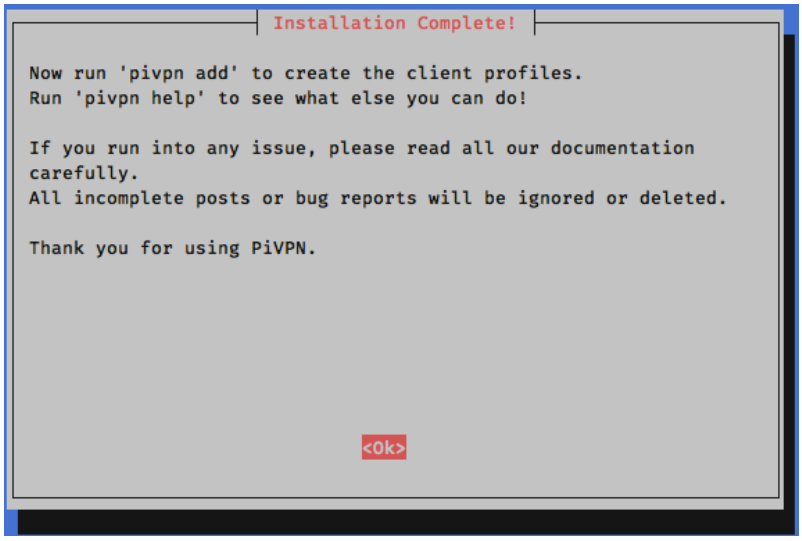
Yêu cầu OpenVPN client ver2.4 trở lên: chọn Yes để tiếp tục



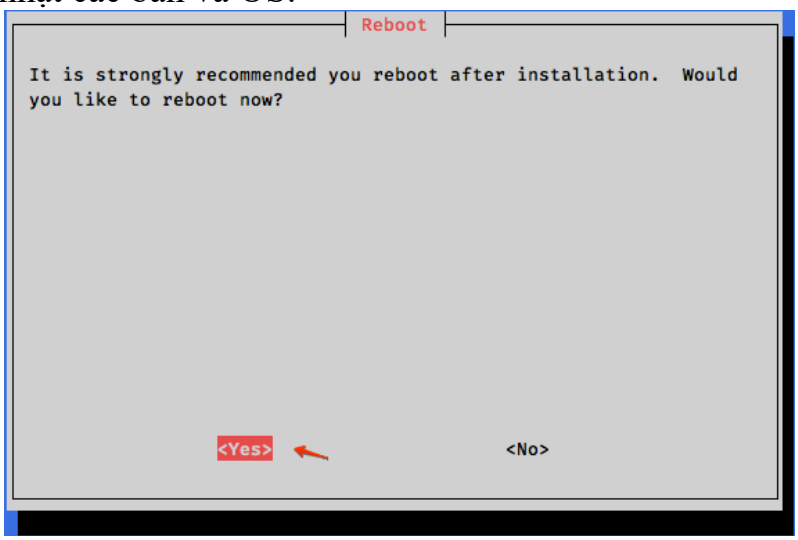
Chọn độ dài bit: 256



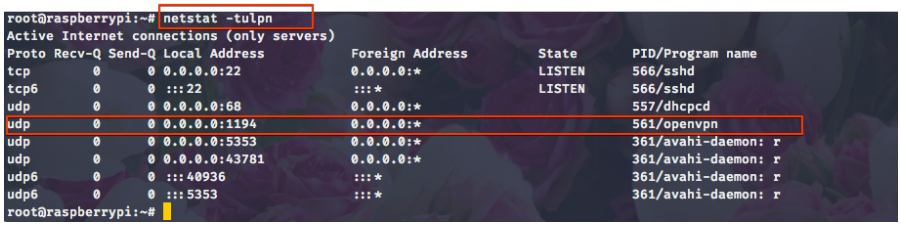
Chọn Ok để tiếp tục



Reboot để cập nhật các bản vá OS:



Kiểm tra openvpn đã hoạt động hay chưa: **netstat -tulpn**



2. Quản trị Openvpn:

Các command: pivpn hỗ trợ:

```
root@raspberrypi:~# pivpn -h
/bin/bash: warning: setlocale: LC_ALL: cannot change locale (en_US.UTF-8)
::: Control all PiVPN specific functions!
:::
::: Usage: pivpn <command> [option]
:::
::: Commands:
:::  -a, add [nopass]     Create a client ovpn profile, optional nopass
:::  -c, clients          List any connected clients to the server
:::  -d, debug            Start a debugging session if having trouble
:::  -l, list             List all valid and revoked certificates
:::  -r, revoke           Revoke a client ovpn profile
:::  -h, help             Show this help dialog
:::  -u, uninstall        Uninstall PiVPN from your system!
:::  -up, update         Updates PiVPN Scripts
:::  -bk, backup          Backup Openvpn and ovpns dir
root@raspberrypi:~#
```

Tạo User bằng command: **pivpn -a**

Quá trình tạo sẽ hỏi điền username, số ngày tài khoản hết hạn và password

```
root@raspberrypi:~# pivpn -a
/bin/bash: warning: setlocale: LC_ALL: cannot change locale (en_US.UTF-8)
/bin/bash: warning: setlocale: LC_ALL: cannot change locale (en_US.UTF-8)
::: Create a client ovpn profile, optional nopass
:::
::: Usage: pivpn <-a|add> [-n|--name <arg>] [-p|--password <arg>]|[nopass] [-d|--days <number>] [-b|--bitwarden]
|--iOS] [-o|--ovpn] [-h|--help]
:::
::: Commands:
:::  [none]              Interactive mode
:::  nopass              Create a client without a password
:::  -n,--name           Name for the Client (default: "raspberrypi")
:::  -p,--password       Password for the Client (no default)
:::  -d,--days           Expire the certificate after specified number of days (default: 1080)
:::  -b,--bitwarden      Create and save a client through Bitwarden
:::  -i,--iOS            Generate a certificate that leverages iOS keychain
:::  -o,--ovpn           Regenerate a .ovpn config file for an existing client
:::  -h,--help           Show this help dialog

Enter a Name for the Client: baonq
How many days should the certificate last? 1080
Enter the password for the client:
Enter the password again to verify:
spawn ./easyrsa build-client-full baonq

Note: using Easy-RSA configuration from: /etc/openvpn/easy-rsa/vars
Using SSL: openssl OpenSSL 1.1.1d  10 Sep 2019
Generating an EC private key
writing new private key to '/etc/openvpn/easy-rsa/pki/easy-rsa-933.42RHSv/tmp.cXFSDv'
Enter PEM pass phrase:
Verifying - Enter PEM pass phrase:
-----
Using configuration from /etc/openvpn/easy-rsa/pki/easy-rsa-933.42RHSv/tmp.bFaO8A
Check that the request matches the signature
Signature ok
The Subject's Distinguished Name is as follows
commonName            :ASN.1 12:'baonq'
Certificate is to be certified until May 19 06:44:59 2024 GMT (1080 days)

Write out database with 1 new entries
Data Base Updated

Client's cert found: baonq.crt
Client's Private Key found: baonq.key
CA public Key found: ca.crt
tls Private Key found: ta.key


================================================
Done! baonq.ovpn successfully created!
baonq.ovpn was copied to:
  /home/pi/ovpns
for easy transfer. Please use this profile only on one
device and create additional profiles for other devices.
================================================
```

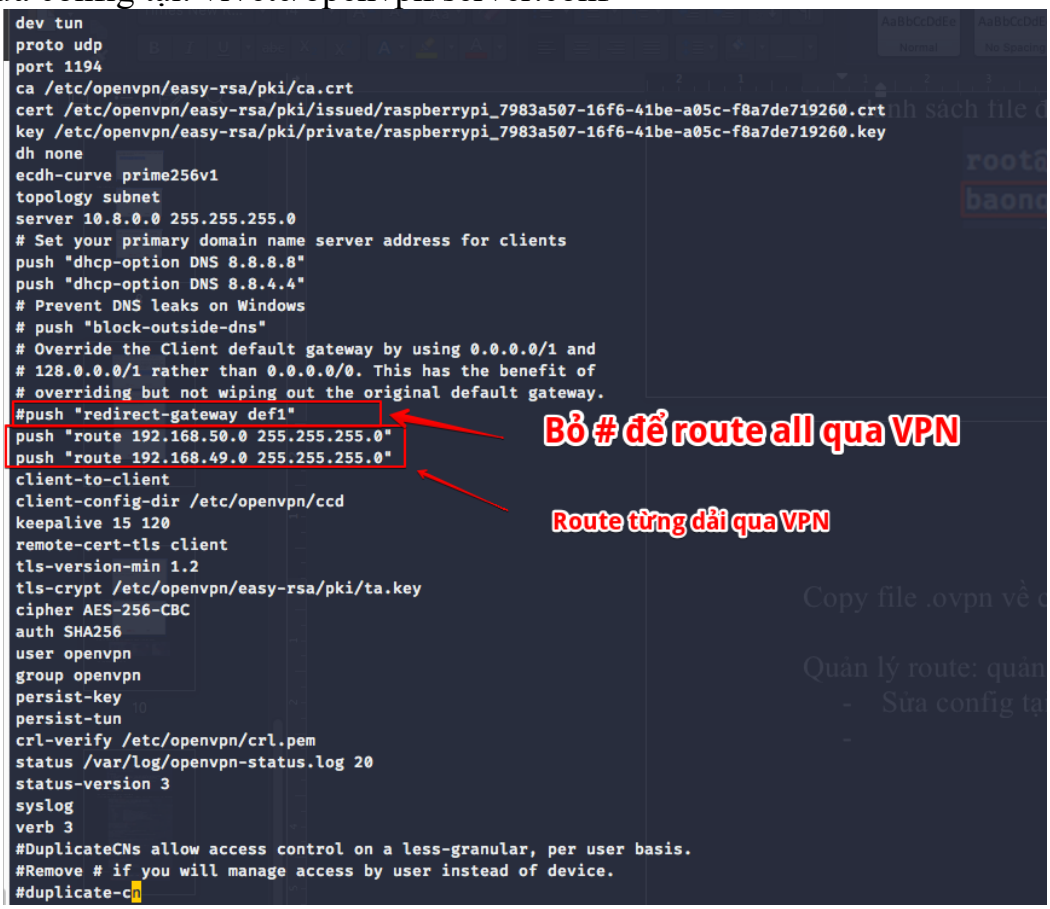
List danh sách file đã tạo:

```
root@raspberrypi:~# ls /home/pi/ovpns
baonq.ovpn
```

Copy file .ovpn về các Client và kết nối VPN

Quản lý route: quản lý routing từ Client đến site VPN

- Sửa config tại: vi /etc/openvpn/server.conf



- Sau khi sửa xong: systemctl restart openvpn