WireGuard VPN

Install wireguard

$ apt install wireguard

Move the wireguard directory

$ cd /etc/wireguard

Create Keys for Server and Client

$ umask 077
$ wg genkey | tee private_key_server | wg pubkey >
public_key_server

$ umask 077
$ wg genkey | tee private_key_client | wg pubkey >
public_key_client

Print keys to terminal for copying

cat private_key_server

```
cat public_key_server
cat private_key_client
cat public_key_client
```

CREATE .CONF FILE FOR SERVER

```
$ umask 077
$ nano wg0.conf
```

_____
_____

```
[Interface]
Address = 192.168.20.1/24
SaveConfig = true
ListenPort = 41194
PrivateKey = # private_key_server

PostUp = iptables -A FORWARD -i %i -j ACCEPT; iptables -t
nat -A POSTROUTING -o eth0 -j MASQUERADE
```

PostDown = iptables -D FORWARD -i %i -j ACCEPT; iptables -t nat -D POSTROUTING -o eth0 -j MASQUERADE

[Peer]
PublicKey = # public_key_client
AllowedIPs = 192.168.20.2/32

CREATE .CONF FILE FOR CLIENT

$ umask 077
$ nano wg0-client.conf

[Interface]
Address = 192.168.20.2/32
PrivateKey = # private_key_client
DNS = 192.168.20.1

[Peer]
PublicKey = # public_key_server
Endpoint = # Server IP:41194

AllowedIPs = 0.0.0.0/0

PersistentKeepalive = 25

FIREWALL RULES

$ ufw enable

ufw allow 41194/udp

ufw allow 22/tcp

ufw allow from 192.168.20.0/24

$ ufw status

NETWORK RULES

Uncomment line in for packet forwarding

$ nano /etc/sysctl.conf

 # net.ipv4.ip_forward=1

$ sysctl -p

INSTALL RESOLVCONF

$ apt install resolvconf

$ nano /etc/resolvconf/resolv.conf.d/head

Add the following lines

nameserver 1.1.1.1

nameserver 1.0.0.1

$ systemctl start resolvconf.service

$ systemctl status resolvconf.service

WIREGUARD COMMANDS

Enable to start at boot-up

$ systemctl enable wg-quick@wg0

```
# Start to.. well, start
$ systemctl start wg-quick@wg0


# Status of wg
$ systemctl status wg-quick@wg0


# Stops service to edit conf files
$ systemctl stop wg-quick@wg0


$ wg-quick up wg0
$ wg-quick down wg0
$ wg
$ wg show
$ ip a show wg0


$ resolvectl status
$ systemd-resolve --status
```

IOS QRCODE -for iphone client app

```
$ apt install qrencode
```

$ qrencode -t ansiutf8 < /etc/wireguard/wg0-client.conf

learn iptables / ufw firwall rules

learn permissions for files chmod / umask

learn vim / nano editors

learn PuTTY shortcuts

learn port knocking / fail2