WireGuard VPN

SERVER SETUP

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