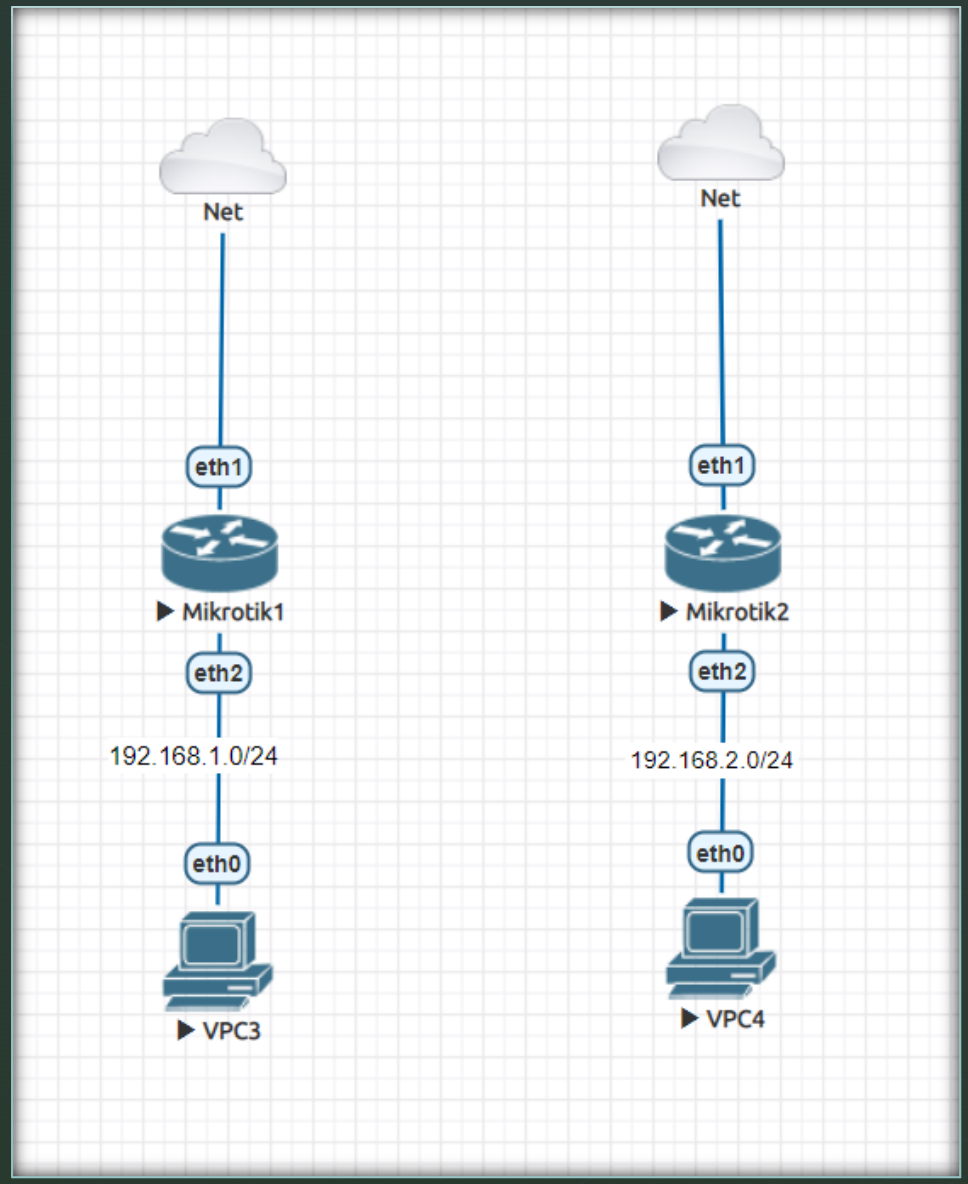
Laboratoare Retelistica

Protocolul Wireguard

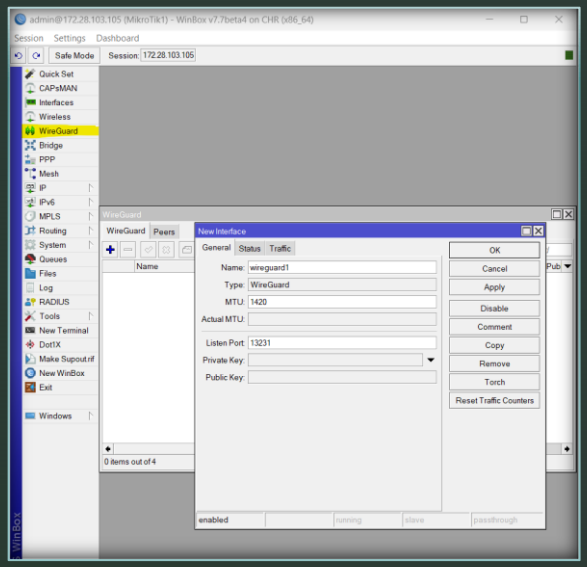
Topologie

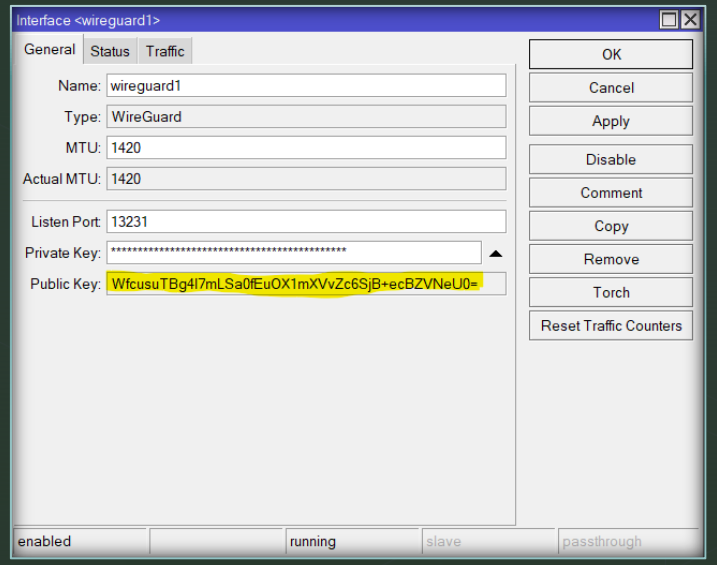
- Avem topologia alaturata cu doua site-uri remote in care vom implementa un VPN Wireguard de tip site-to-site si folosind sistemul de operare de pe calculator vom face implementarea peer-to-site.
- Fiecare retea interna (192.168.1.0/24 si 192.168.2.0/24) are access la internet.



Configurare VPN pe MikroTik1

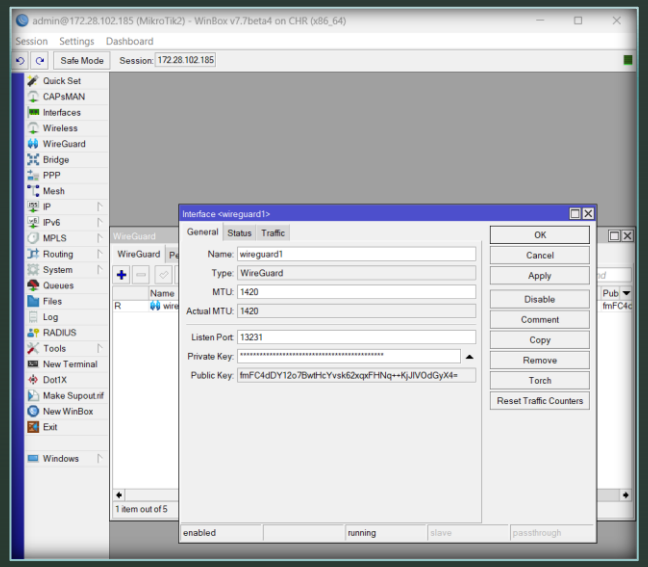
- Pentru a configura un server de Wireguard VPN intram in meniu si adaugam un nou server.
- Dupa ce salvam interfata putem vedea cheile generate si cheia publica o vom folosi pentru conexiunea la celalat router.

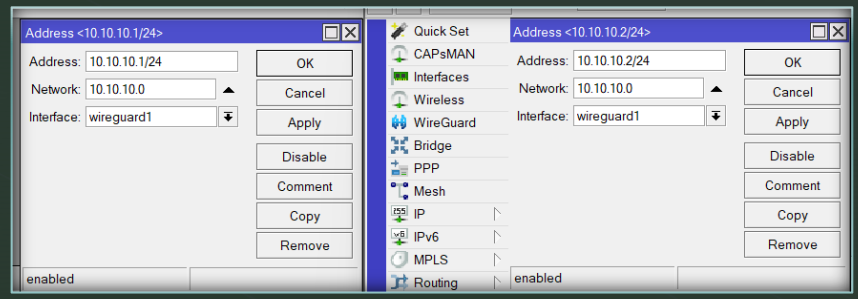




Configurare VPN pe MikroTik2

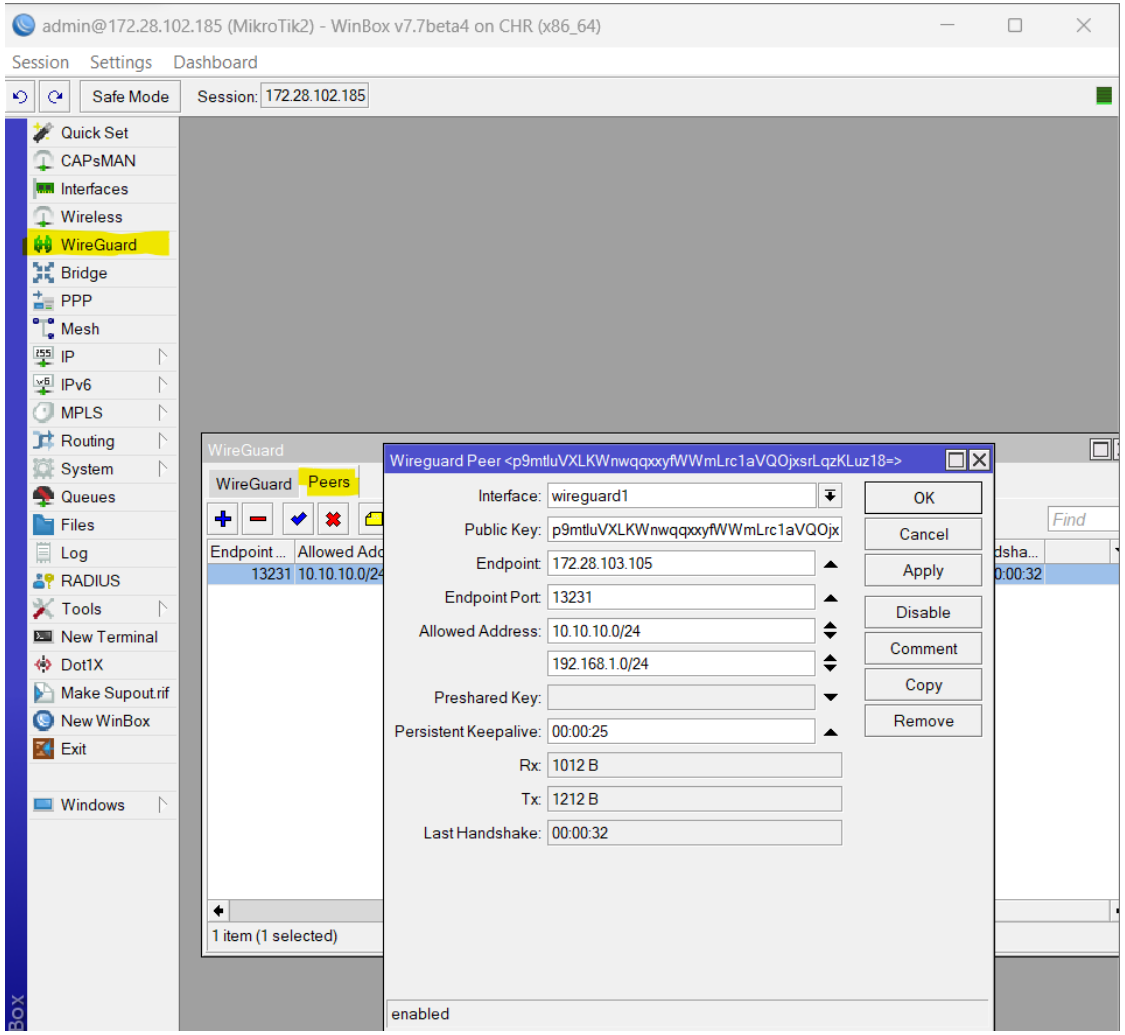
- Repetam procedura pe al doilea router.
- Si le asignam interfetelor nou create un ip in aceeasi retea (in cazul nostrum 10.10.10.1 si respective 10.10.10.2.





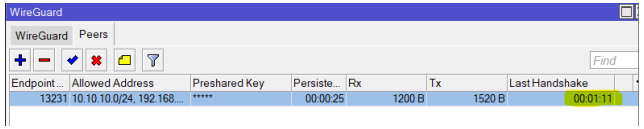
Configurare conexiune intre cele doua.

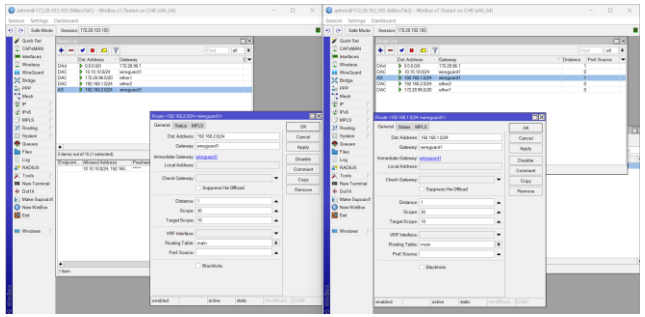
- Incepem pe Mikrotik1 si facem o conexiune client accesand Wireguard->Peers.
- Aici avem nevoie de cheia publica a routerului MikroTik2.
- La Endpoint trecem adresa publica a routerului MikroTik2.
- La Allowed Address trecem la ce retele vrem sa permitem accesul prin vpn in zona remote.
- In cazul nostru vom avea 10.10.10.0/24 si 192.168.2.0/24.
- Si trebuie sa setam un Persistent Keepalive de cca 10-2-0 secunde.
- Repeteam procedura si pe MikroTik2.



Configurare conexiune intre cele doua.

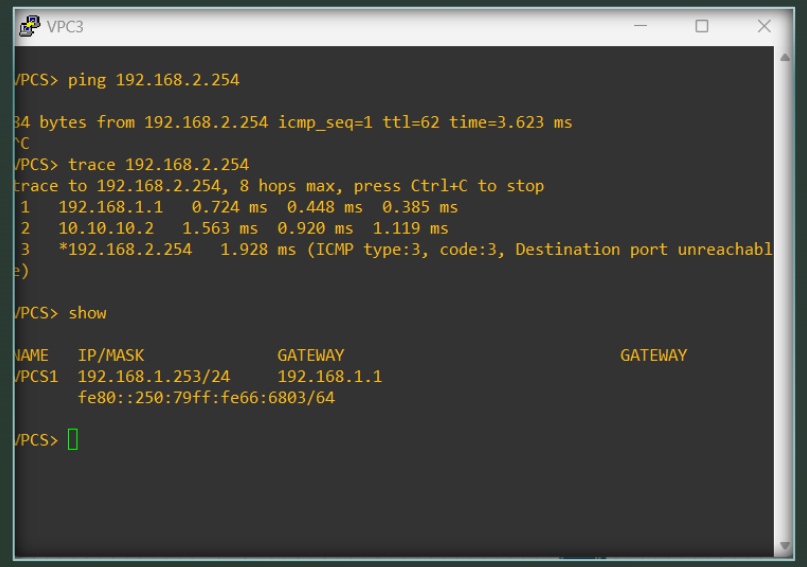
- Dupa ce vedem ca exista un handshake.
- Trebuie sa facem rutile intre cele doua.

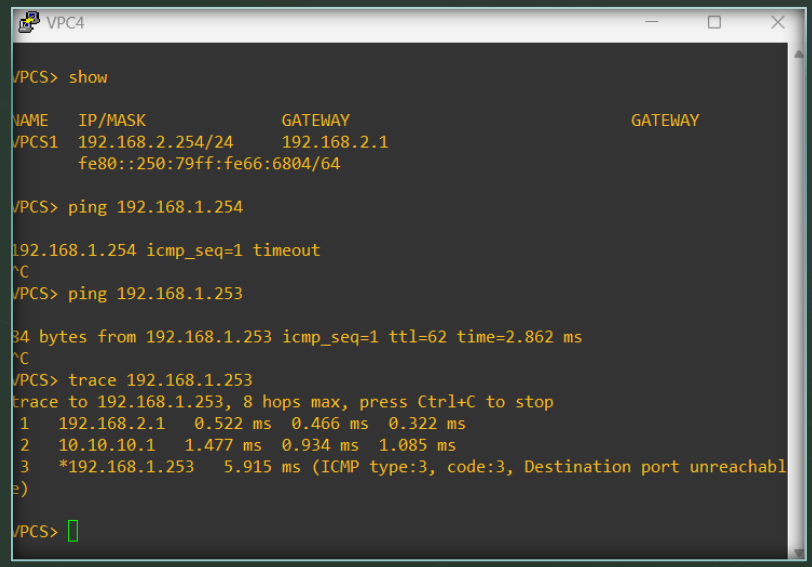




Verificare conexiune.

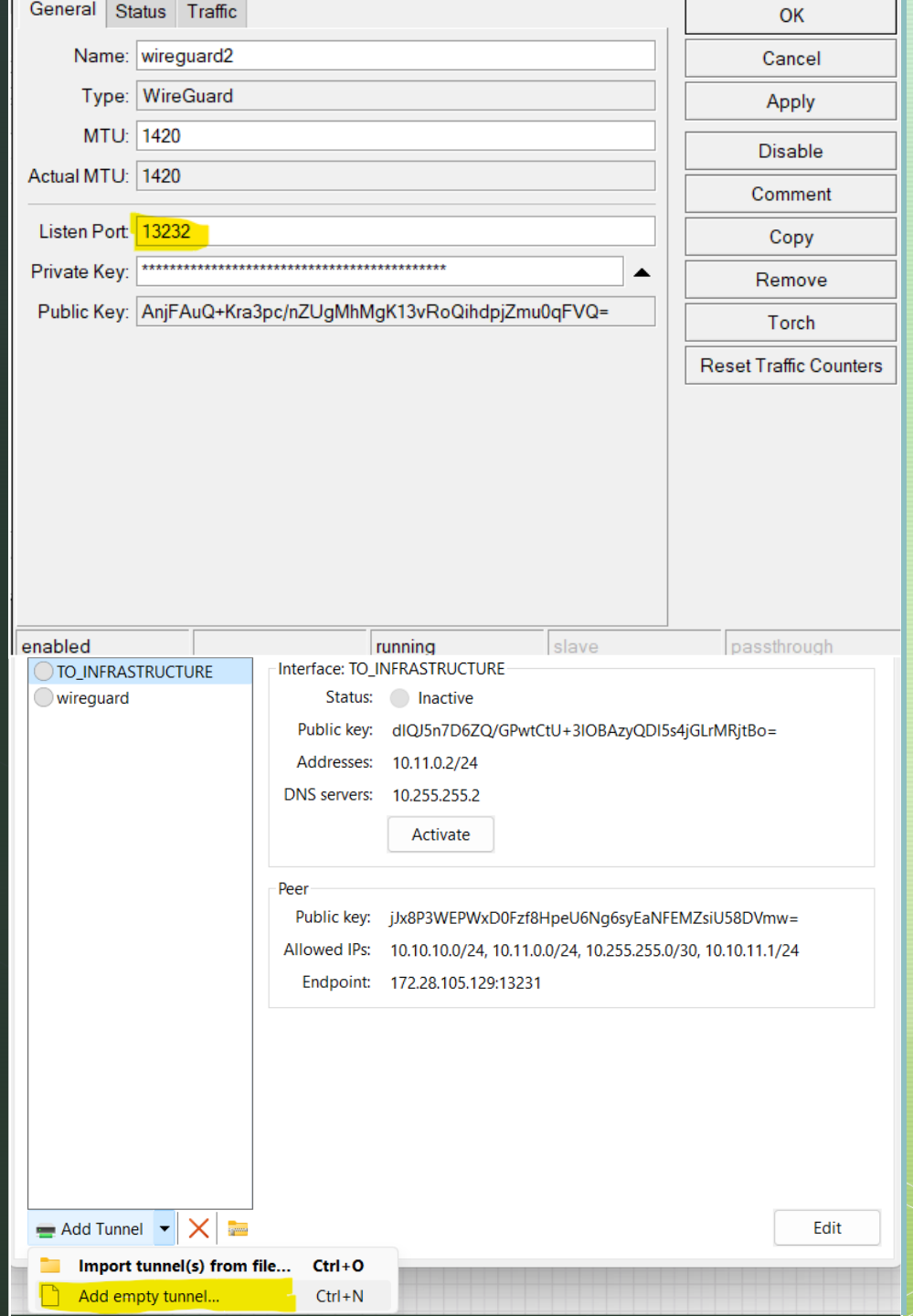
- De pe cele doua calulatoare incercam un ping si traceroute.





Conexiune peer to site

- Pentru acest scenario folosim routerul Mikrotik1.
- Facem o noua interfata wireguard si asignam un port diferit.
- Pe calculatorul nostru instalam wireguard.
- Dupa care adaugam un tunel gol.



Conexiune peer to site

- Vom avea ca default setate cheile publice si private.
- In interface vom asigna adresa interfetei de wireguard:

Address = 10.10.11.2/24

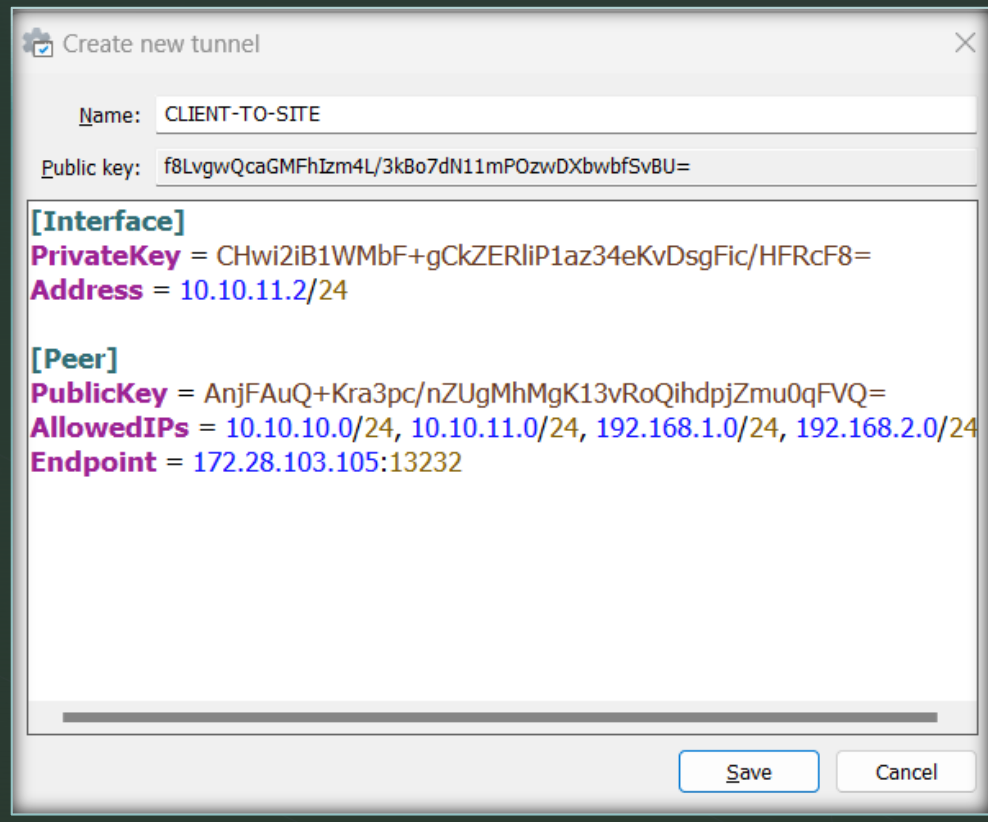
- Iar in zona de peer vom seta certificatul public al interfetei de wg mikrotik, lista de retele la care permietm conexiunea si adresa si portul astfel:

[Peer]

PublicKey = AnjFAuQ+Kra3pc/nZUgMhMgK13vRoQihdpjZmu0qFVQ=

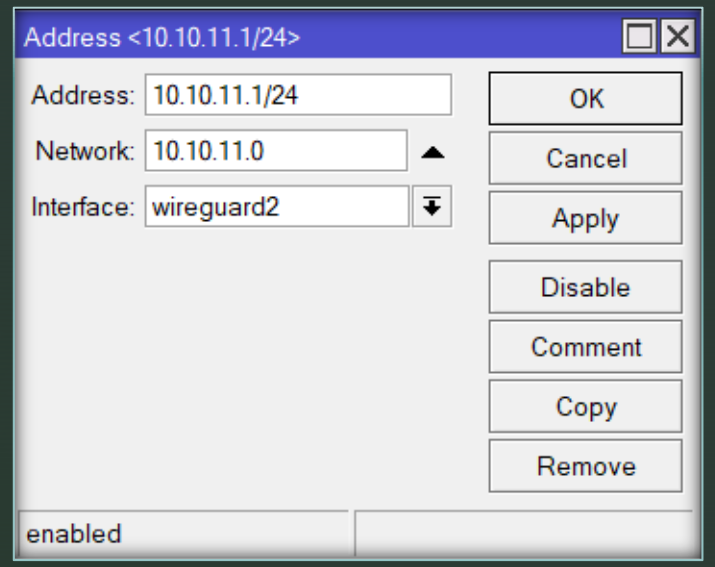
AllowedIPs = 10.10.10.0/24, 10.10.11.0/24, 192.168.1.0/24, 192.168.2.0/24

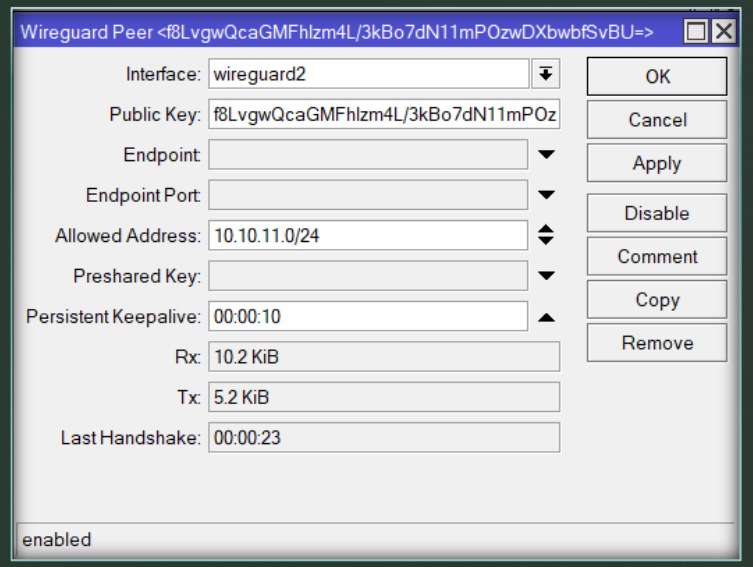
Endpoint = 172.28.103.105:13232



Conexiune peer to site

- Pe MikroTik1 setam adresa ip interfetei wireguard2 (10.10.11.1/24) .
- Dupa care facem un peer nou.
- Il asignam interfata wireguard2
- Punem cheia publica a clientului nostrum.
- La Allowed address trecem clasa asignata interfetei 2 si setam un persisten keepalive.





Testare

- Activam interfata pe client si verifiam daca exista flux de date atat pe RX cat si pe TX.
- Dupa care putem face cateva teste de ping si traceroute.