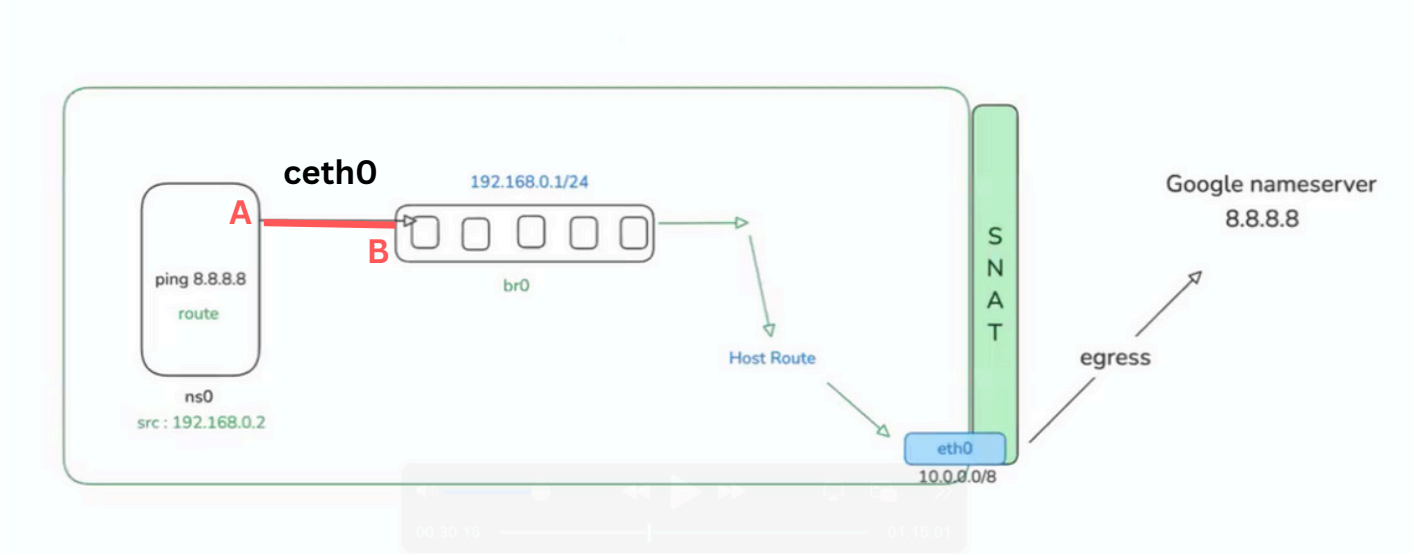
EGRESS TRAFFIC



→ sudo ip netns add ns0

→ sudo ip link addd br0 type bridge

→ sudo ip link br0 up

→ sudo ip addr add 192.168.0.1/16 dev br0

→ sudo link add veth0 type veth peer name ceth0 (peer name ceth0 from a to b)

→ sudo ip link set ceth0 netns ns0

→ sudo ip link set veth0 master br0

→ sudo ip netns exec ns0 ip link set ceth0 up (Up ns0 part)

→ sudo ip link set veth0 up (Up veth0 side)

Configure ns0 namespace

→ sudo addr add 192.168.0.2/16 dev ceth0

Check if it's able to ping from ns0

→ sudo ip netns exec ns0 bash

→ ping 192.168.0.1

→ ping 8.8.8.8

→ **unreachable**

Check the route it could be one Destination IP

→ ip netns exec ns0

→ ip route add default via **192.168.0.1** [It's used bridge route]

→ sudo apt install tcpdump -y [Install tcp dump]

→ tcpdump -i bro icmp

Host → route

→ ifconfig eth0

→ tcpdump -i eth0 icmp

→ sudo iptables --append FORWARD --in-interface br0 --jump ACCEPT (Give permission for Host route outbound and inbound)

→ sudo iptables --append FORWARD --out-interface br0 --jump ACCEPT (Give permission for Host route outbound and inbound)

→ sudo iptables -v -L FORWARD

Now we can try in Host

→ tcpdump -i eth0 icmp

→ ip netns exec ns0 bash

→ ping 8.8.8.8

Finally we can install SNAT

→ sudo iptables -t nat -L -n -v (See your Nat [Network address translation] table)

→ sudo iptables -t nat -A POSTROUTING -s 192.168.0.0/16 -j MASQUERADE (This source **IP 192.168.0.0** private ip to change public **IP 192.168.0.0**)

→ sudo iptables -t nat -L -n -v (See your Nat [Network address translation] table)

7. PROCESS COMMUNICATION BETWEEN NAMESPACES

→ sudo ip netns add blue-namespace

→ sudo ip netns add lemon-namespace

→ sudo ip netns exec blue-namespace ip addr add 192.168.0.1/24 dev veth-blue

→ sudo ip netns exec blue-namespace ip addr add 192.168.0.2/24 dev veth-lemon

→ sudo ip netns exec blur-namespace ip link set veth-blue up

→ sudo ip netns exec lemon-namespace ip link set veth-lemon up

→ sudo ip netns exec blue-namespace ip route add default via 192.168.0.1 dev veth-blue

→ sudo ip netns exec lemon-namespace ip route add default via 192.168.0.2 dev veth-lemon

→ sudo ip netns exec lemon-namespace route

→ sudo ip netns exec blue-namespace route

Test Connectivity

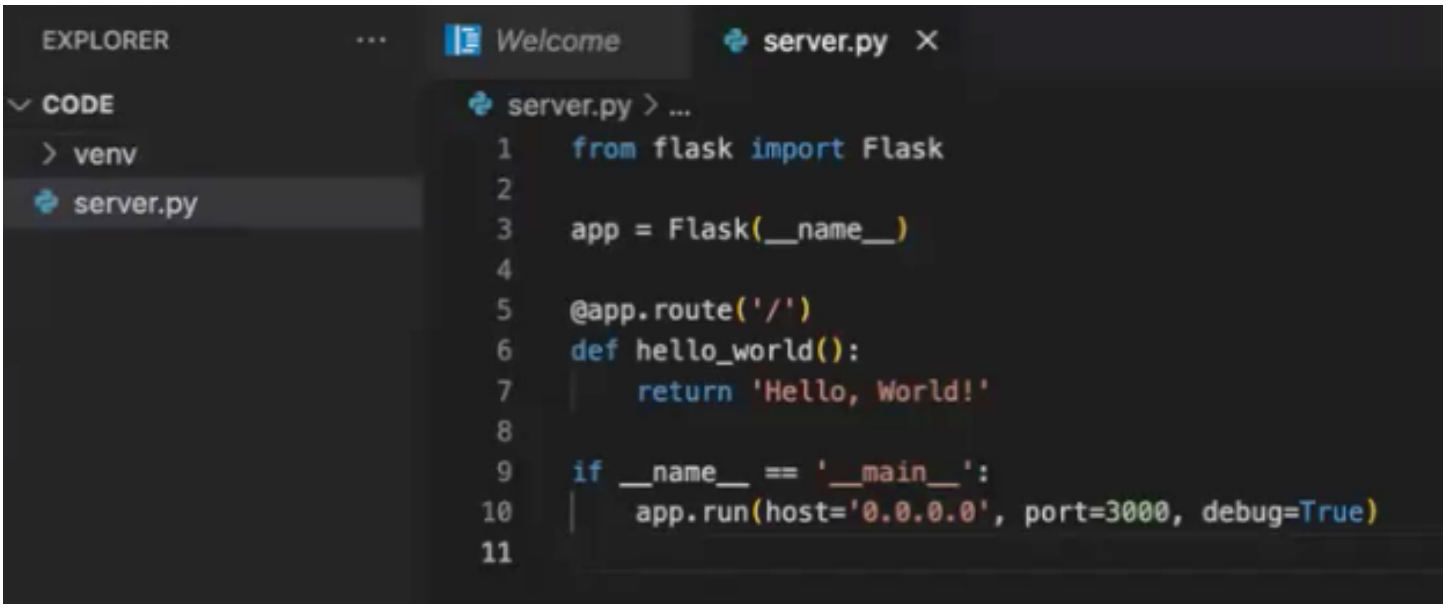
→ sudo ip netns exec blue-namespace ping 192.168.0.2

→ sudo ip netns exec lemon-namespace ping 192.168.0.1

Create a server inside Host and run from blue-namespace and call from lemon-namespace

python3 -m venv venv

source venv/bin/activate



flask run

→ ip netns identify (Check where we are; we must be in root)

→ pip3 install flask (Install package)

→ sudo ip netns exec blue-namespace /bin/bash (we will run from blue-namespace, not from root)

python3 server.py

→ ip addr (From root check the ip, make sure your virtual venv already running mode)

→ sudo ip netns exec lemon-namespace /bin/bash (Let’s go to another namespace)

→ curl -v http://192.168.0.1:3000

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