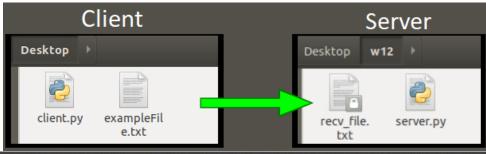
I was able to successfully established communication between my C2 server and client, and enabled file uploads to the server:

```
dsu@dsu-virtual-machine:~/Desktop$ sudo python3 client.py
[sudo] password for dsu:
[*] Received File Path: b'/home/dsu/Desktop/exampleFile.txt'
[*] File Contents sent to Server
```

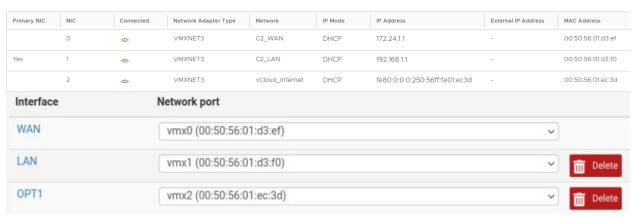
```
dsu@dsu-virtual-machine:~/Desktop/w12$ sudo python3 server.py
[sudo] password for dsu:
[*] TCP server listening on 192.168.1.104:80
[*] Accepted connection from 172.24.1.2:37968
[*] File path sent to client: /home/dsu/Desktop/exampleFile.txt
[*] File Received from client
[*] File Saved
[*] Received Contents:
Super secret contents
```

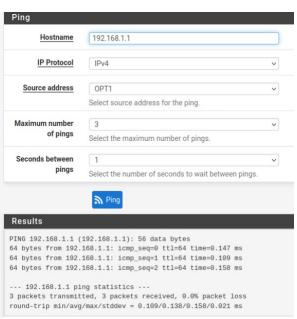


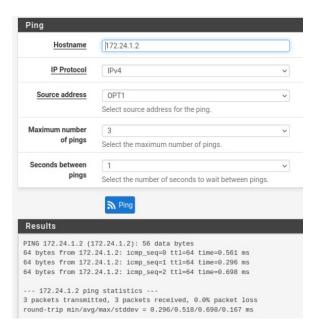
Packet Capture Output: /tmp/packetcapture-vmx0-20240419062346.pcap

```
11:23:54.949251 IP 172.24.1.2.53334 > 192.168.1.104.80: tcp 0
11:23:54.950170 IP 192.168.1.104.80 > 172.24.1.2.53334: tcp 0
11:23:54.950515 IP 172.24.1.2.53334 > 192.168.1.104.80: tcp 0
11:23:54.951337 IP 192.168.1.104.80 > 172.24.1.2.53334: tcp 33
11:23:54.951524 IP 172.24.1.2.53334 > 192.168.1.104.80: tcp 0
11:23:54.952018 IP 172.24.1.2.53334 > 192.168.1.104.80: tcp 0
11:23:54.952242 IP 172.24.1.2.53334 > 192.168.1.104.80: tcp 0
11:23:54.952292 IP 192.168.1.104.80 > 172.24.1.2.53334: tcp 0
11:23:54.953064 IP 192.168.1.104.80 > 172.24.1.2.53334: tcp 0
11:23:54.953272 IP 172.24.1.2.53334 > 192.168.1.104.80: tcp 0
```

However, I have been encountereing challenges while attempting to integrate pfSense with an external network and install Snort. Despite configuring the settings in the lab environment as outlined in the screenshots below, including assigning it a separate interface and verifying connectivity to both LAN and WAN, I have been unable to access any sort of external networks to complete the Snort installation thus far.







At this point, I have still been unable to resolve this issue despite multiple attempts. I understand and apologize that my submission is incomplete, and I am actively working on resolving the problem. I was not expecting this much of a struggle as I have worked with snort and network communications before. However given the assignment is deadline is soon, I want to submit this to ensure that I have something turned in. I will hopefully reupload before the deadline with a completed assignment.