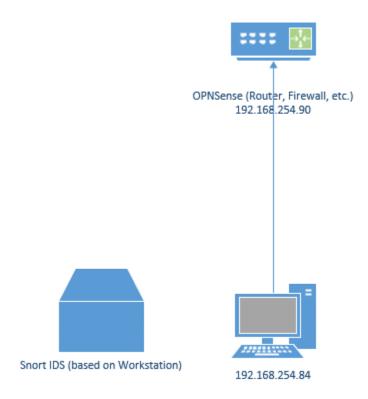
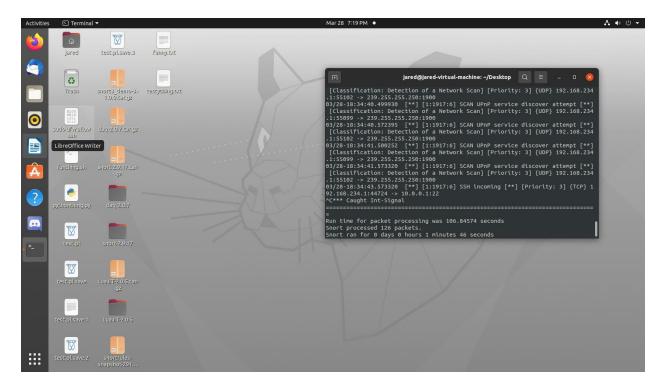
Here's a diagram for my virtual network. Just like we've gone over in class, OPNSense is on 1921.168.254.90 and allocates the IP address of 192.168.254.84 to the client workstation through a LAN, where Snort IDS also runs. The workstation uses Ubuntu and OPNSense acts as a router and firewall.



Proof of SSH (taken from last assignment):



Here's a screenshot of an SSH attempt from OPNSense to the workstation being refused:

```
root@OPNsense:~ # ssh 192.168.254.84
ssh: connect to host 192.168.254.84 port 22: Connection refused
root@OPNsense:~ # ■
```

Screenshot of Nmap detection:



Screenshot of FTP from host machine to workstation:

```
Microsoft Windows [Version 10.0.18363,1440]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Jared\rightarrow{\text{tp 192.168.254.84}}

Connected to 192.168.254.84.

201 (vs.Frd 3.0.3)
200 Always in UTB mode.
User (192.168.254.84(none)): jared
331 Please specify the password.

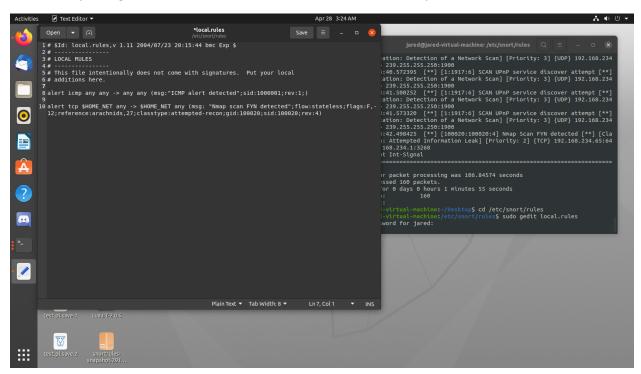
Password:
230 Login successful.

ftp>
```

Screenshot of FTP server on workstation refusing OPNSense:

```
*** OPNsense.localdomain: OPNsense 21.1 (amd64/OpenSSL) ***
LAN (em1)
                -> v4: 192.168.234.1/24
WAN (em0)
                -> v4: 192.168.254.90/24
HTTPS: SHA256 3F 0E 23 B0 42 88 6F 71 91 C1 29 9C E0 15 2F 4A
              1C 82 11 F1 93 D8 B3 51 4C 1F F8 DD 49 FD 16 DB
 0) Logout
                                         7) Ping host
 1) Assign interfaces
                                         8) Shell
 2) Set interface IP address
                                        9) pfTop
                                        10) Firewall log
 3) Reset the root password
 4) Reset to factory defaults
                                        11) Reload all services
 5) Power off system
                                        12) Update from console
 Reboot system
                                        13) Restore a backup
Enter an option: 8
root@OPNsense:~ # ftp 192.168.254.84
ftp: Can't connect to '192.168.254.84:21': Connection refused
ftp: Can't connect to '192.168.254.84:ftp'
tp>
```

As for the updating the rules, here's a rule I added that detected Nmap scans:



And finally, here's my screenshot of connecting to uat.edu!

