

Lessons Learned In my Lab

Networks

- I am getting a better understanding of how devices communicate with each other on a network, with other networks, DNS servers and firewalls.
- I understand now that in order for a firewall to protect my servers and clients in the way I have it set up (my lab topology diagram), the servers and clients need to be on two different subnets
- The two subnets allow data to go through the router/firewall before communication
- If the devices were on the same network as a whole the firewall will only be Infront of the WAN (internet) connection

Configuring

- In my specific lab, I understand that I have to configure the networks in a specific way. By using a **NAT network protocol**, allowing the devices to communicate and connect to the internet (WAN) via the host machine
- I will then have two adapters for two **internal networks** (subnet_servers & subnet_clients) and this can be done through virtual box and subnetting IP addresses.

Operating Systems

- I have a better understanding of how to use CLI like **shell (bash)** to communicate with the **Windows and Kali Linux OS** to make changes and configurations. Along with **Ubuntu** to install Splunk and other services.

Importance of Documentation

- I always was aware that documenting what your doing is important, however, not to this degree.
- After going through a whole installation/configuration process I can forget exactly what I did in the next hour so documenting everything is crucial
- Also documenting has helped me understand the purpose in what I am doing and is more of a stress reliver when something goes wrong.
- I can easily read my documentation, see where I went wrong an easily get back on my path.

Small Realizations

- I did not realize in many of these virtual machines like Splunk and OPNsense firewall, because their VMs and not running through a cloud, in order for me to use them in my VM clients like Windows and Kali Linux I must keep them running.
- Sometimes I would close the firewall or splunk not thinking that of course now Icant connect to the web GUI on my OS.