**Network Setup**

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My network setup in Ubuntu is based off of two things the first is in VirtualBox on settings > network on VirtualBox where the adapter is attached to a bridged adapter instead of NAT.

A computer screen shot of a network

Description automatically generated

Changing NAT to bridged adapter treats each VM as a separate Device on the network and as an external network as opposed to NAT which treats it as a private internal network and doing everything through the host network instead of it being its own device. Normally NAT would work perfectly fine when connecting to the internet but not when communicating with other VMs on my laptop. Unlike the setup in centOS I do not need to enable anything in any file for networking to work as shown below

A computer screen with white text

Description automatically generated

I also changed my static hostname which would usually display as server A but because I am using the smart terminal on SMARTTy it doesn’t show that here is how it looks in normal terminal in SmaRTTY



I did this with a sudo command changing the hostname with the command **hostnamectl set-hostname servera** and afterwards restarted the network with the command **sudo sytemctl restart network** this is optional and not necessary but nice to have alongside that you may have noticed I pinged server a with the name instead of the ping this was done by adding that in the **hosts** file in by putting server a ip and what I can put to refer to server a

A screen shot of a computer

Description automatically generated

I did however have to install net-tools for my script with the command **sudo apt install net-tools** to get my script to work

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**Script**

Below is a picture of the script I made to get network info.

A screen shot of a computer program

Description automatically generated

Explanation: This code is a modified version of my script from my CentOS server no permissions had to be changed as that was already changed when making it in CentOS. The code is wrapped in a bracket so I can use **tee** to be able to both output the command in the command line and a file The first thing I do is get the hostname where I use the hostname command and then pipe an awk command to print the first field along with my own label hostname this can be useful for knowing the name of the server if you are using the my other sever you can where I put the static hostname and server IP in the host server you can use the hostname to communicate with my centOS server.

Next I have the IPv4 Address something that will always work to use when wanting to communicate with my server it is essential to know this if you want to communicate with my server. Next I used the hostnamectl and awk to print the server type which can be good the command layout of the server system the way some things are done in CentOS could be different in how things are done in Ubuntu or another distro so knowing what type of server you are using can be helpful for that. I also have the script show open ports and use an awk command to filter and display the open ports for security configurations if you need to do anything with that. I put the status of the firewall to see whether or not it is active along with any rules you will later see it is not later in this document but I use the ufw status where ufw or uncomplicated firewall is the firewall for ubuntu server and the status of it this could be useful to see the state of the firewall for security purposes.

**Code in action**

A screenshot of a computer

Description automatically generated

**Info dumped in networkInfo.txt**

**A screenshot of a computer

Description automatically generated**

**Sources**

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