**Network Setup**

**Setup**

My network setup in CentOS 7 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

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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.

Another change had to make was configuring a setting in the **ifcfg-enp0s3** this could be located in **/etc/sysconfig/network-scripts/** I changed the onboot from no to yes as seen on this picture I needed to do it with sudo

A computer screen with white text

Description automatically generated

I then restarted the network with **sudo sytemctl restart network** command and because of this I can communicate with my ubuntu server

A computer screen with white text

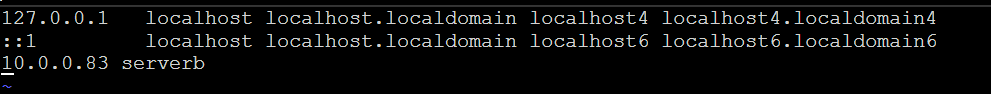
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I also changed my static hostname which would usually display as server A but because I am using the smart terminal on SMARTTy it doesn’t show that here is how it looks in normal terminal in SmaRTTY

A screen shot of a number

Description automatically generated

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 b with the name instead of the ping this was done by adding that in the **hosts** file in by putting server b ip and what I can put to refer to server b



**Script**

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

A computer screen shot of a black screen

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Explanation: 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 also put the status of the firewall rules with the firewall cmd command which show the current zones with the get-zones command and also the active zones with get active zones these commands can be useful to know current firewall rules in case you need to configure that finally under the display active status comment I use an awk command to see the status of ONBOOT in the ifcfg-enp0s3 file. If you read earlier you would know that ONBOOT has to be set to yes for the networking to work so to know whether or not that is yes or no is important especially if networking may not be working the ONBOOT being set to no could be why. The last thing I had to was change the permissions to execute the code I did this with the command **chmod u+x netInfo.awk**

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**Code in action**

A computer screen with white text

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**Opening networkInfo.txt**

A computer screen shot of a computer program

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**Sources**

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