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Abteilung: Informationstechnologie
Schwerpunkt: Netzwerktechnik

Ethical hacking of a CTF-VM

Laboratory protocol Exercise 7: Ethical hacking of a CTF-VM

Figure 1: Grouplogo

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4.1 Setting up the virtual machines.

To get started with this CTF, make sure that VirtualBox version 7.1.4 is used. The VM to attack must be imported by double-clicking the provided `.ova` file. After the import is complete, the network settings must be changed to use Host-only Adapter mode. Since using the default Host-only network did not work, we had to create a new Host-only network. To do this, either press `<C-h>` or click on `File` > `Tools` > `Network Manager`, as shown in Figure 2.

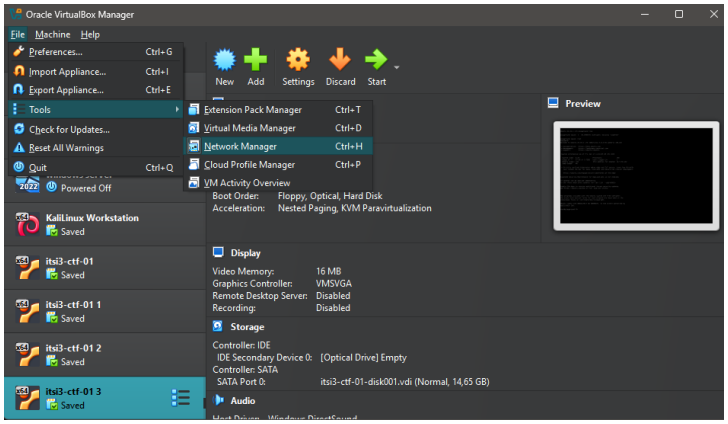


Figure 2: Opening VirtualBox Network Manager settings

In this menu, click on `Create`, then check the `Enable Server` box to enable the DHCP server so the target VM will receive an IP address. Then, click on `Adapter` to view the IP range of the network, which in our case is `192.168.15.0/24`, which can be seen in Figure 3.

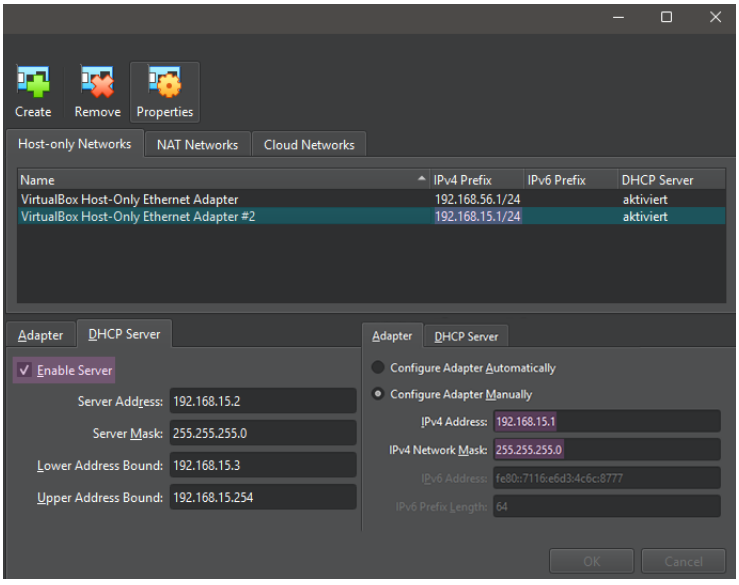


Figure 3: Showing the IP settings for the new Host-only network

Next, open the virtual machine settings by selecting the VM in the list and pressing `<C-s>`. Under the `Network` section, change the network adapter to use the Host-only Adapter and select the VirtualBox Host-only Ethernet Adapter #2, which was just created. Perform this step for both the target VM and the Kali VM, as detailed in Figure 4.

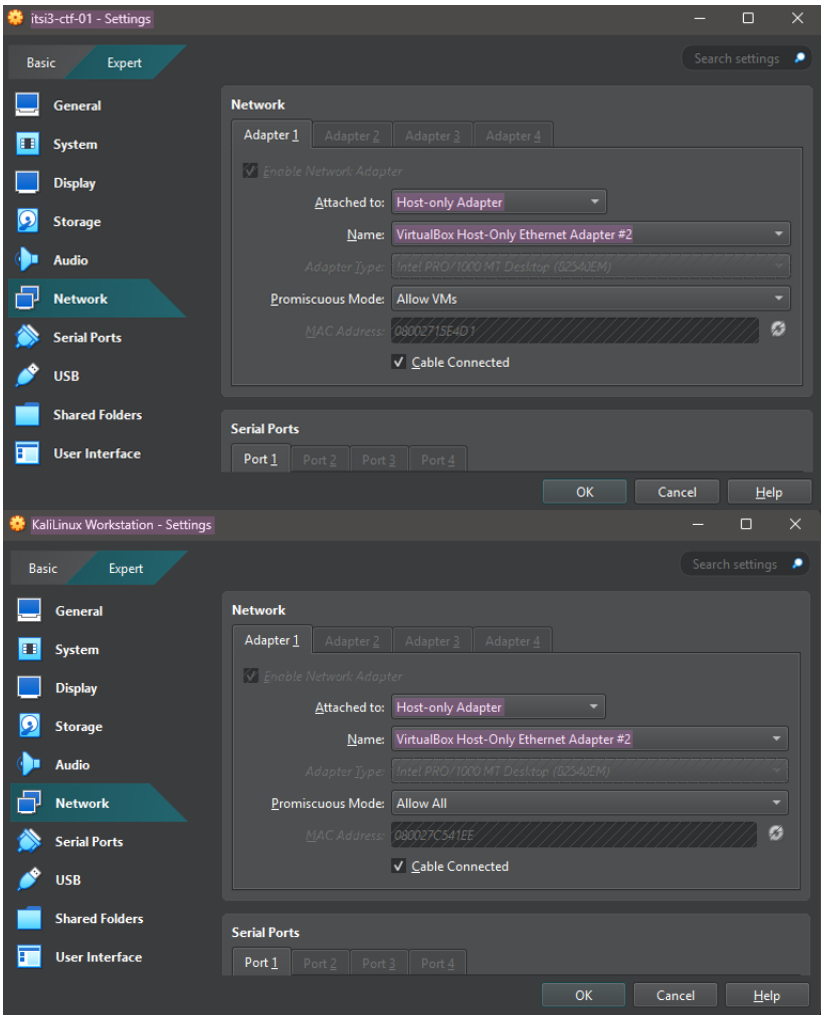


Figure 4: Showing the network configuration of the virtual machines

4.2 Reconnaissance: Scanning the Network

Any attack starts with reconnaissance, which in this case means scanning the network with `nmap`. Since we don't know the IP address of the target server yet, we need to scan the network to find it. For this, the command `nmap 192.168.15.0/24` is used to scan the entire network for open ports, as illustrated in Figure 5.

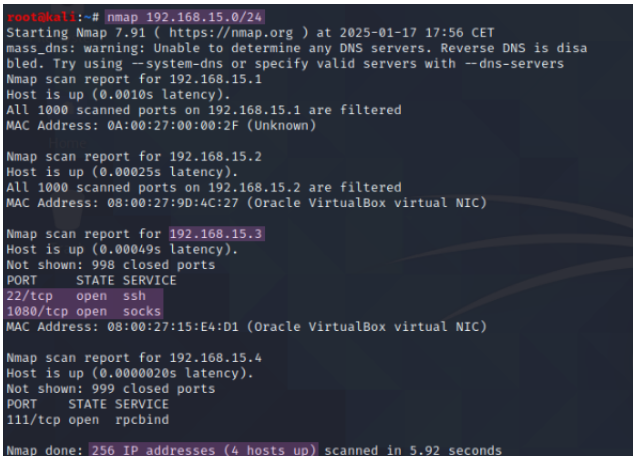
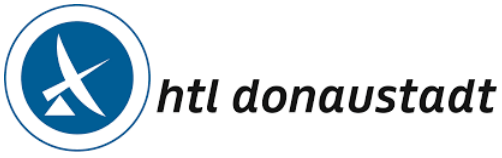


Figure 5: Results of the nmap scan

We can detirme that the target has the ip address `192.168.15.3` since as seen in Figure 3



5 References

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