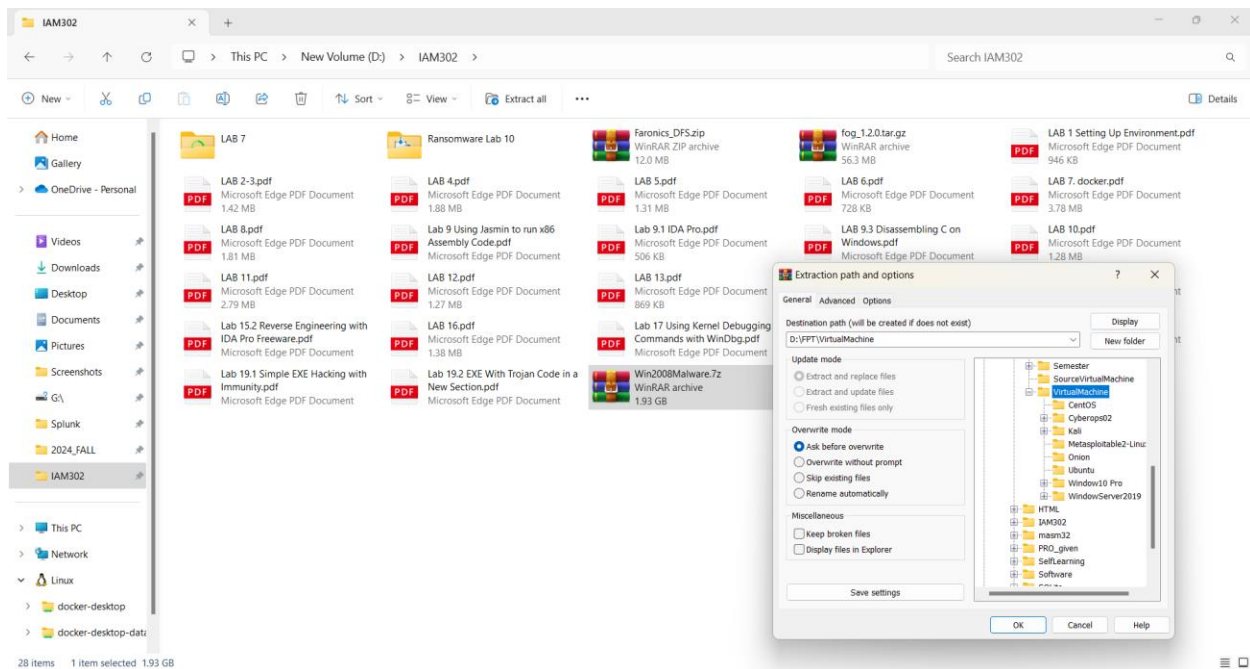
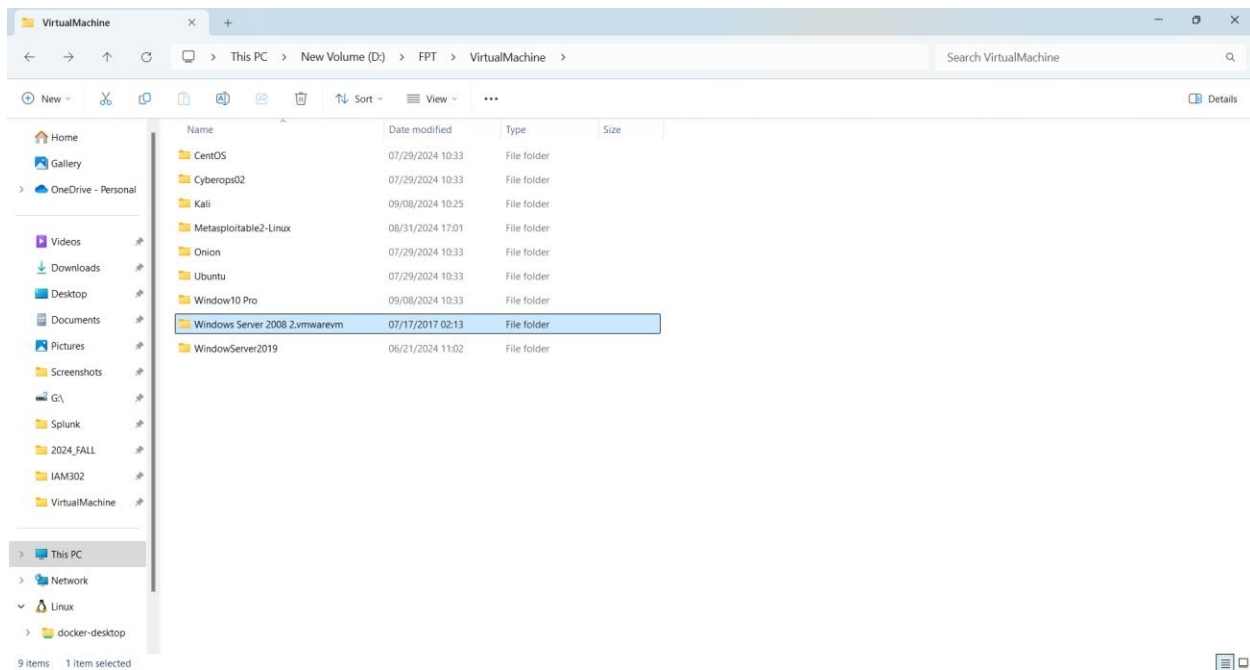


LAB 1: Setting Up Environment

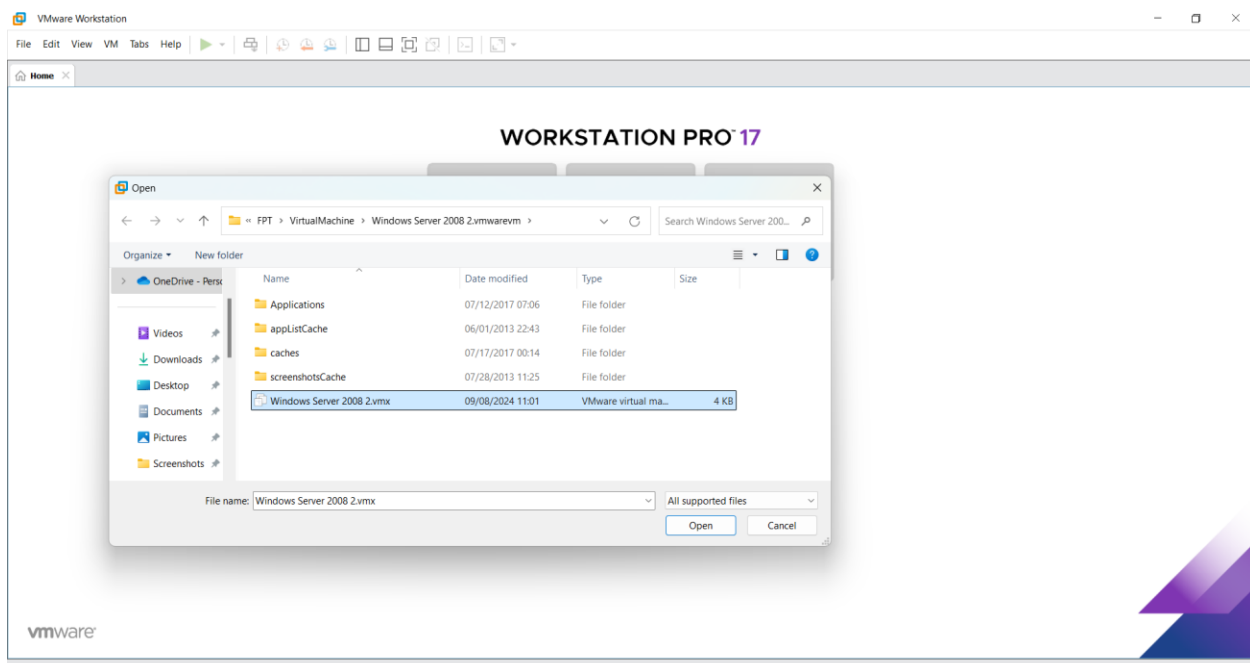
Purpose: We will use Kali Linux to simulate the Internet, and the Windows machine will be fooled by it.

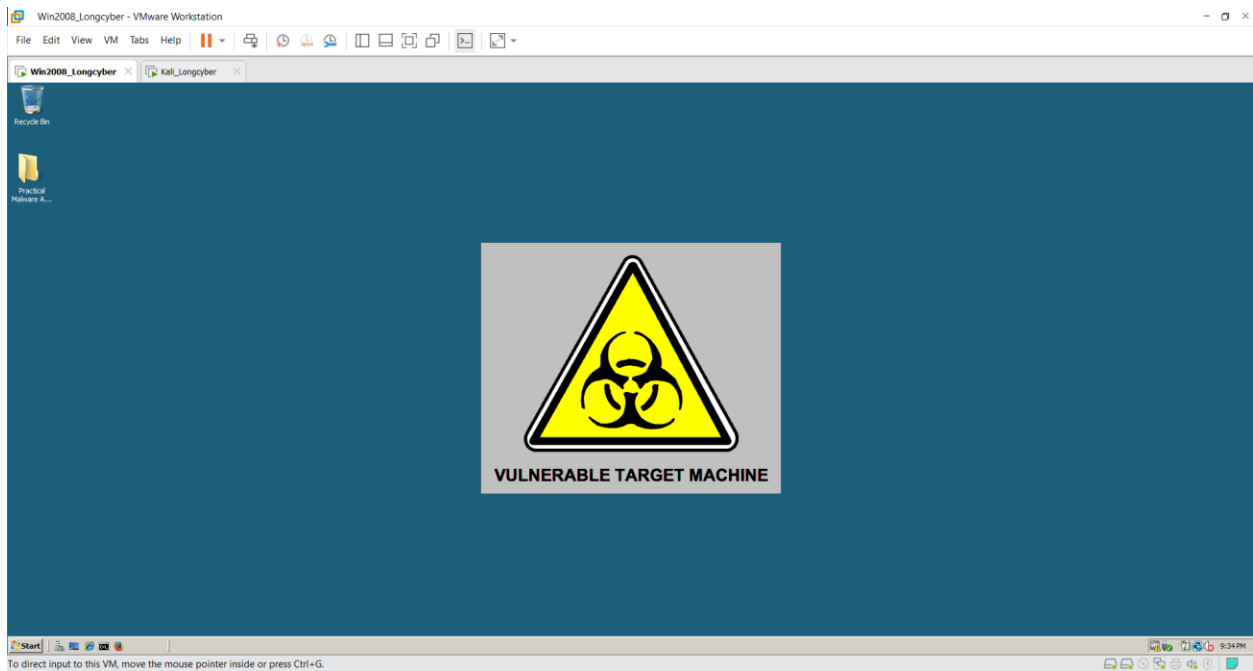
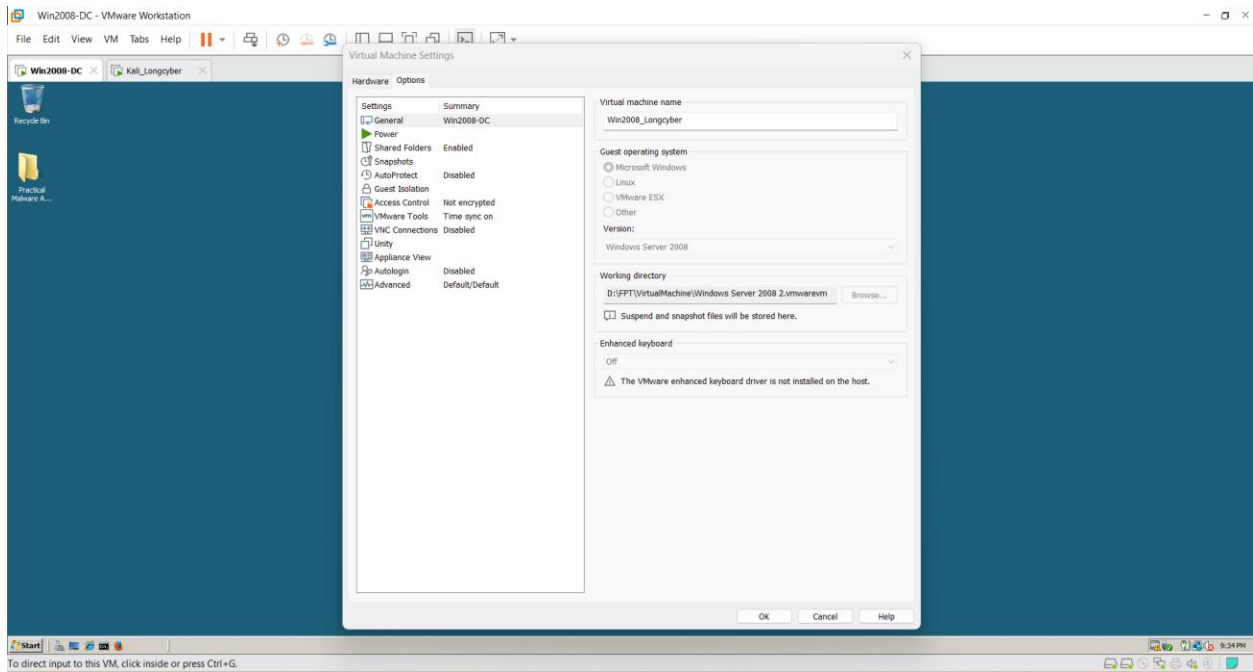
Extracting the Virtual Machine: Right-click the Win2008-Target.7z, kali-linux-2019.3-vmwarei386.7z file, click 7-Zip, and click "Extract Files...". In the "Extract to:" box, enter the path to the folder you prepared.

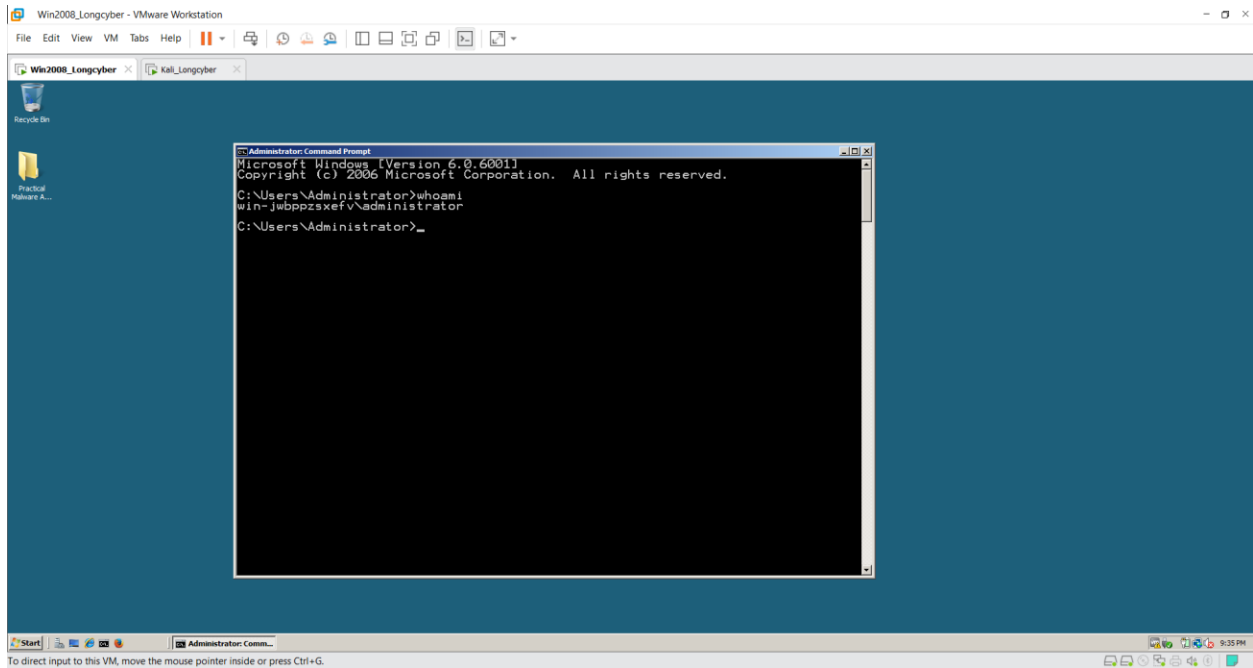




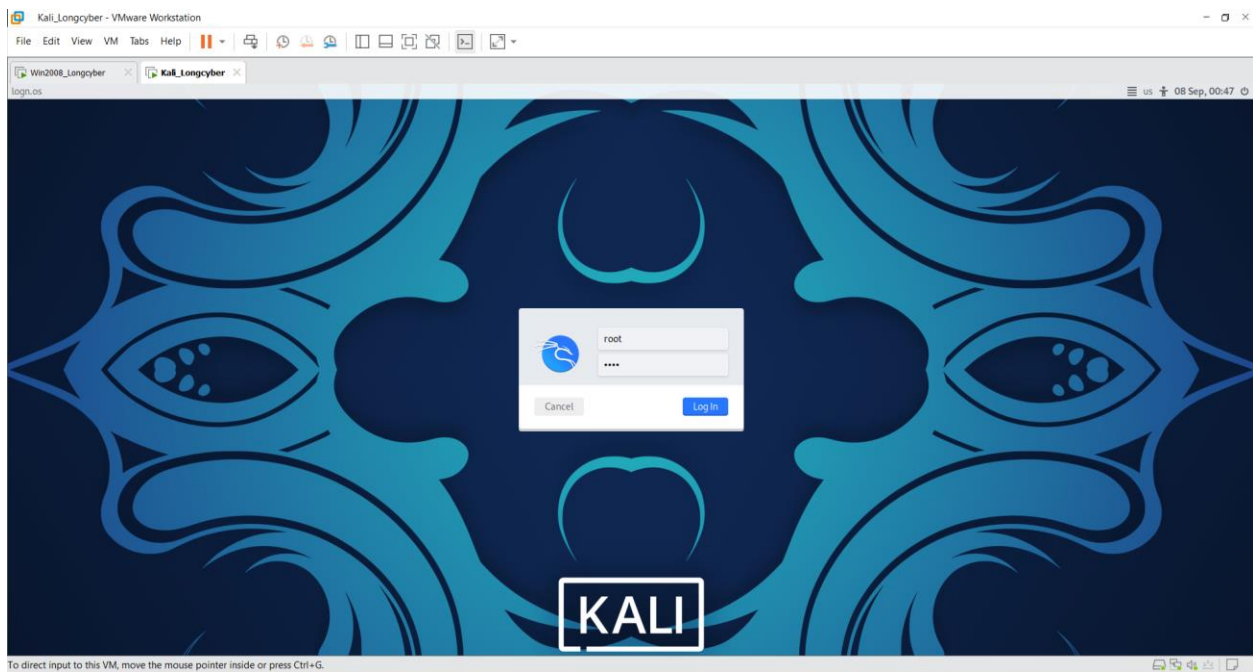
Starting your Win2008-Target Virtual Machine

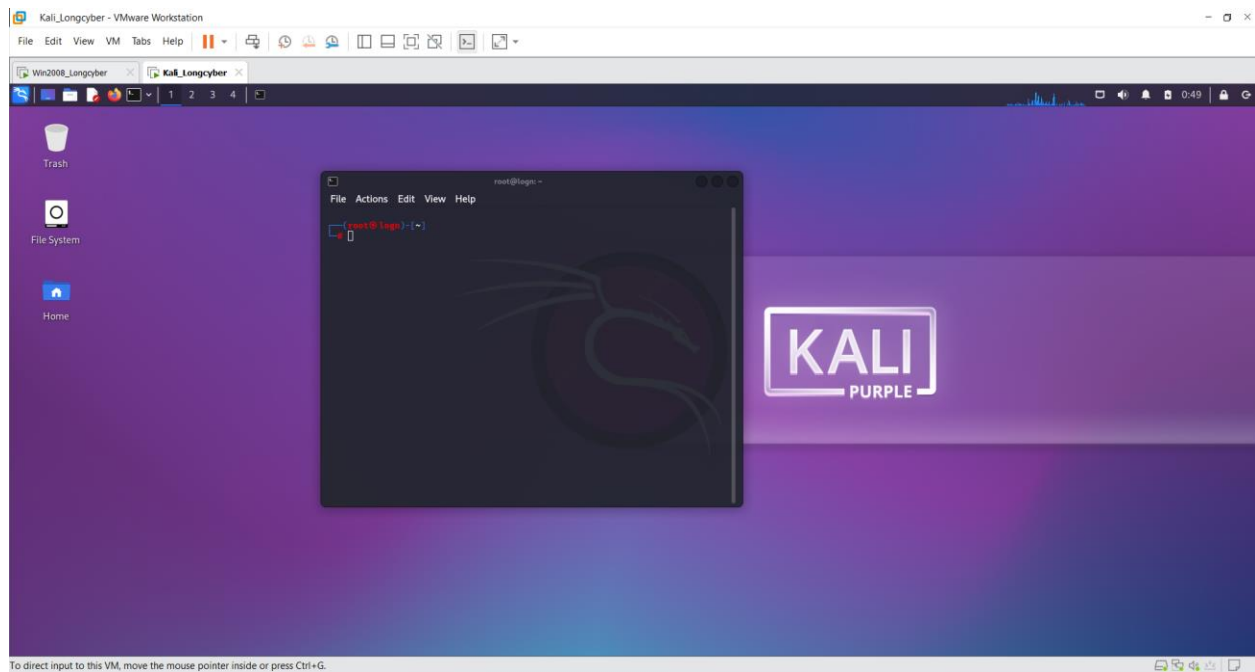






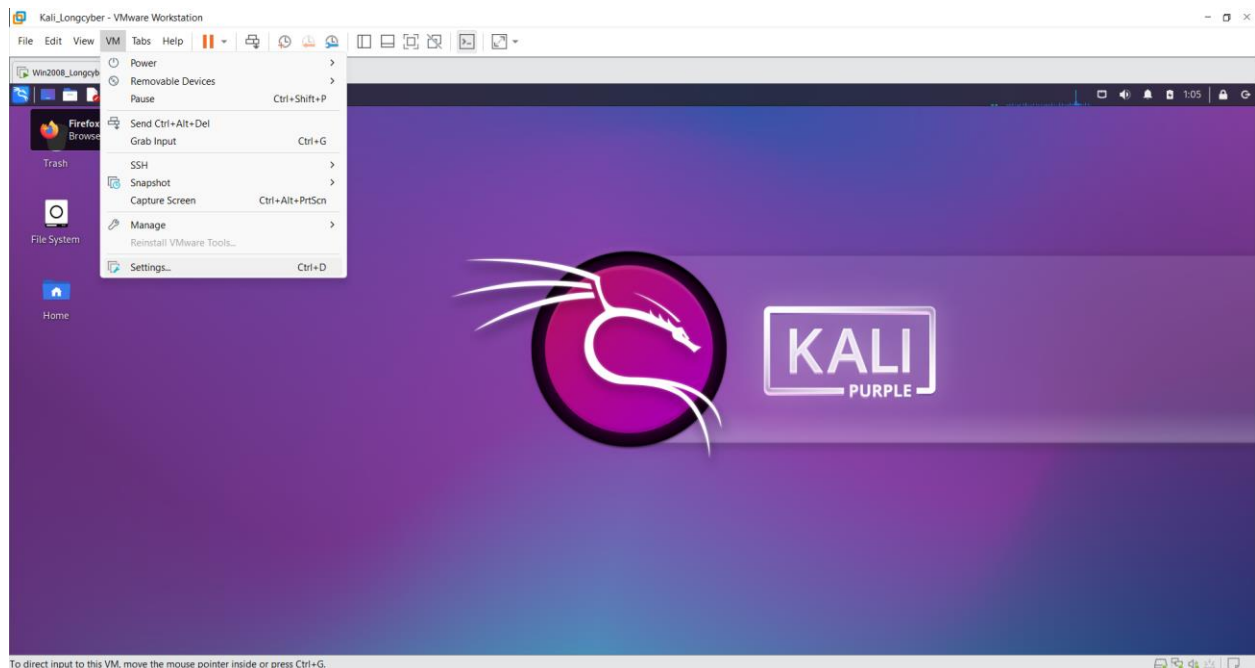
Starting the Kali Linux Machine and Adjusting Networking

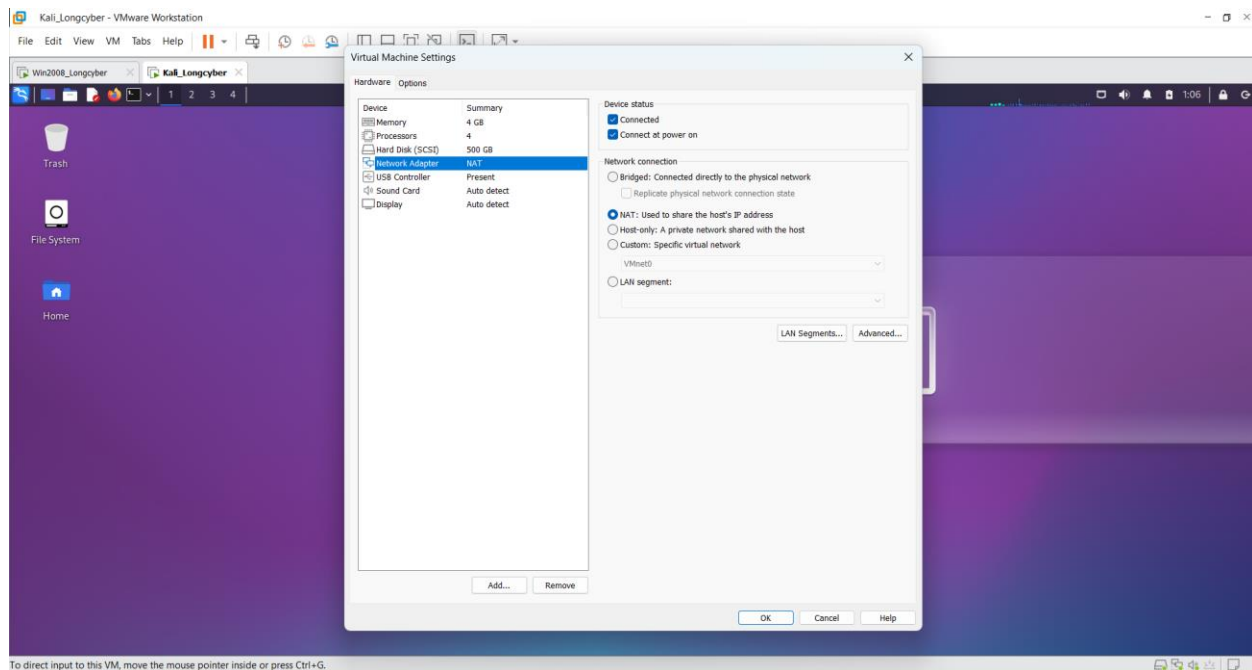




Setting the Kali Linux VM to NAT Networking

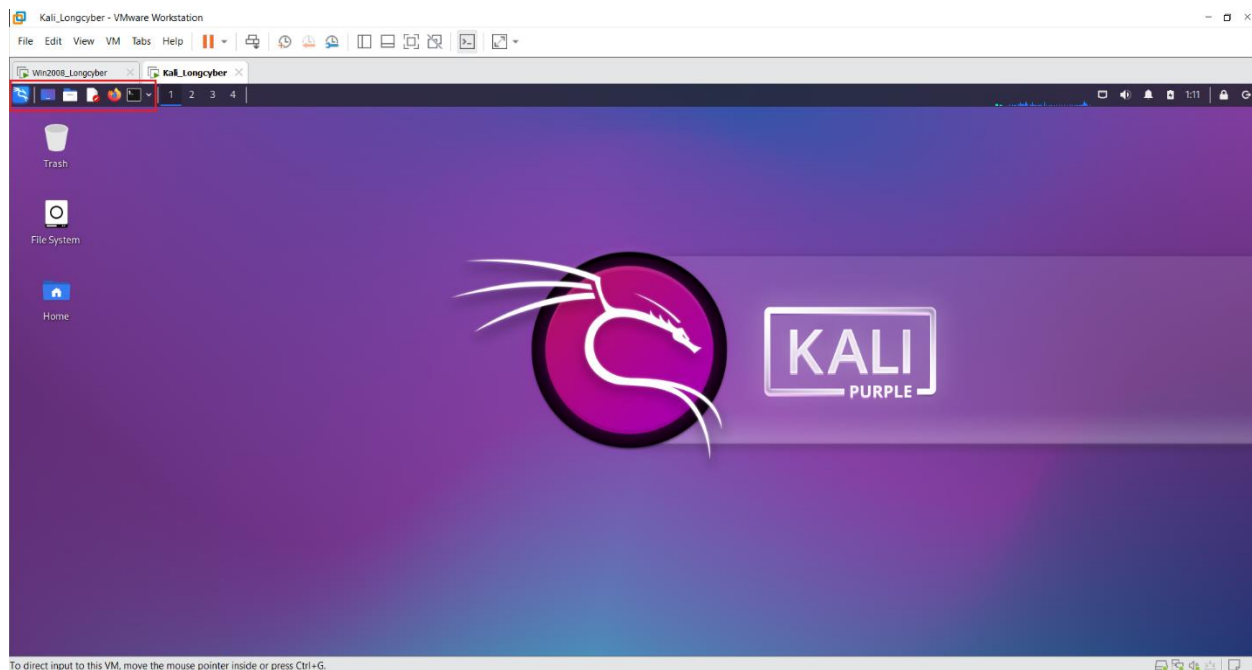
In the VMware window showing your Kali Linux desktop, on the top left, click VM, "Settings". In the "**Virtual Machine Settings**" box, on the left side, click "**Network Adapter**". On the right side, click "**NAT**". Click **OK**.





At the top left of the Kali Linux desktop, find these items:

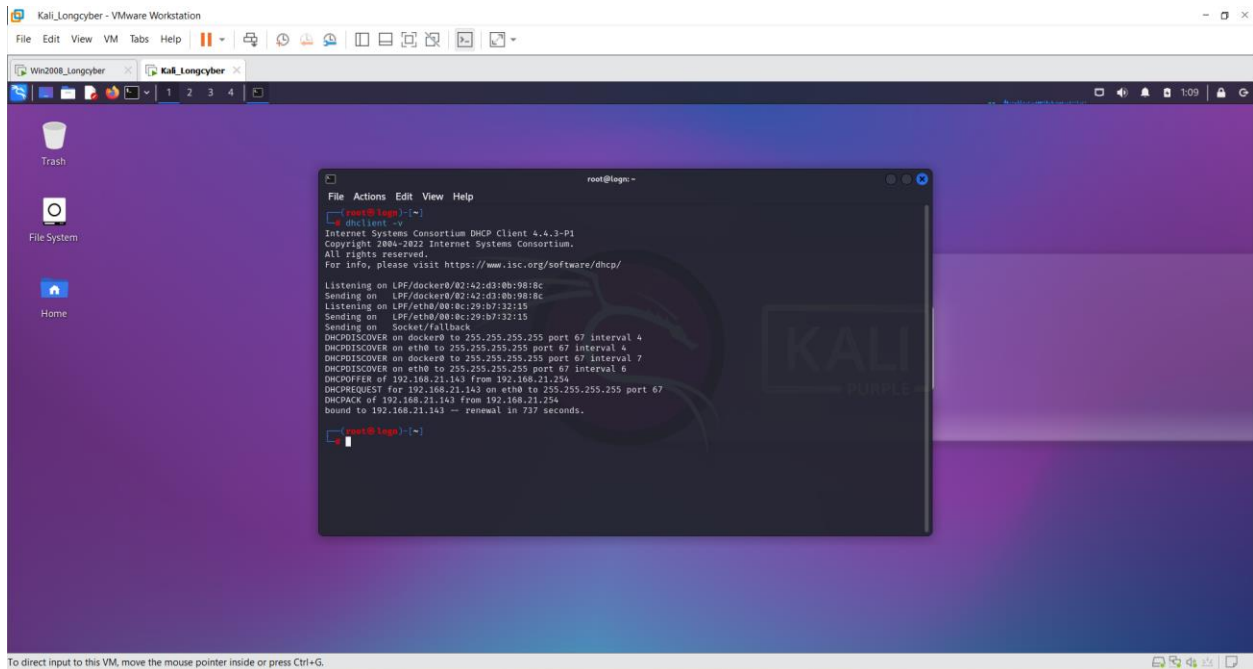
- "Applications" menu
- "Places" menu
- A blue icon that FireFox ESR
- A rectangular black icon that opens a Terminal window



At the top left of the Kali Linux desktop, click the rectangular black icon to open a **Terminal window**.

In the **Terminal window**, type in this command to get a new IP address, and then press the Enter key:

dhclient -v



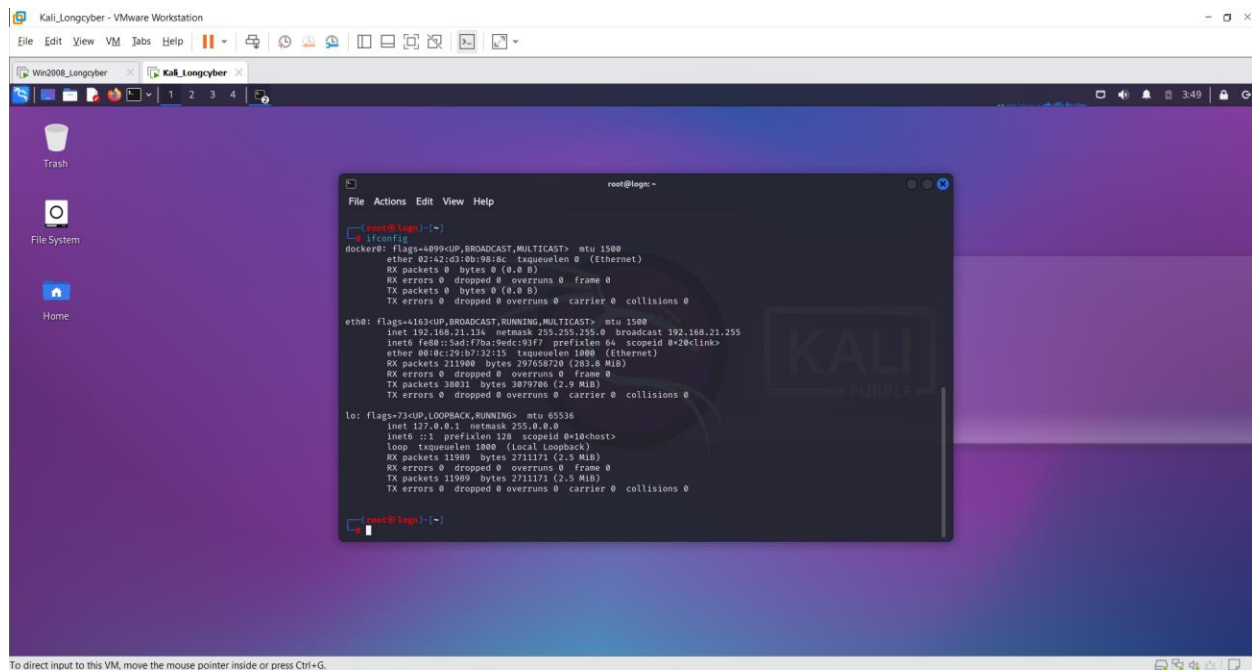
Finding the Kali Machine's IP Address

On your Kali Linux machine, in a Terminal window, execute this command:

ifconfig

Find your IP address and make a note of it. In the example below, it is

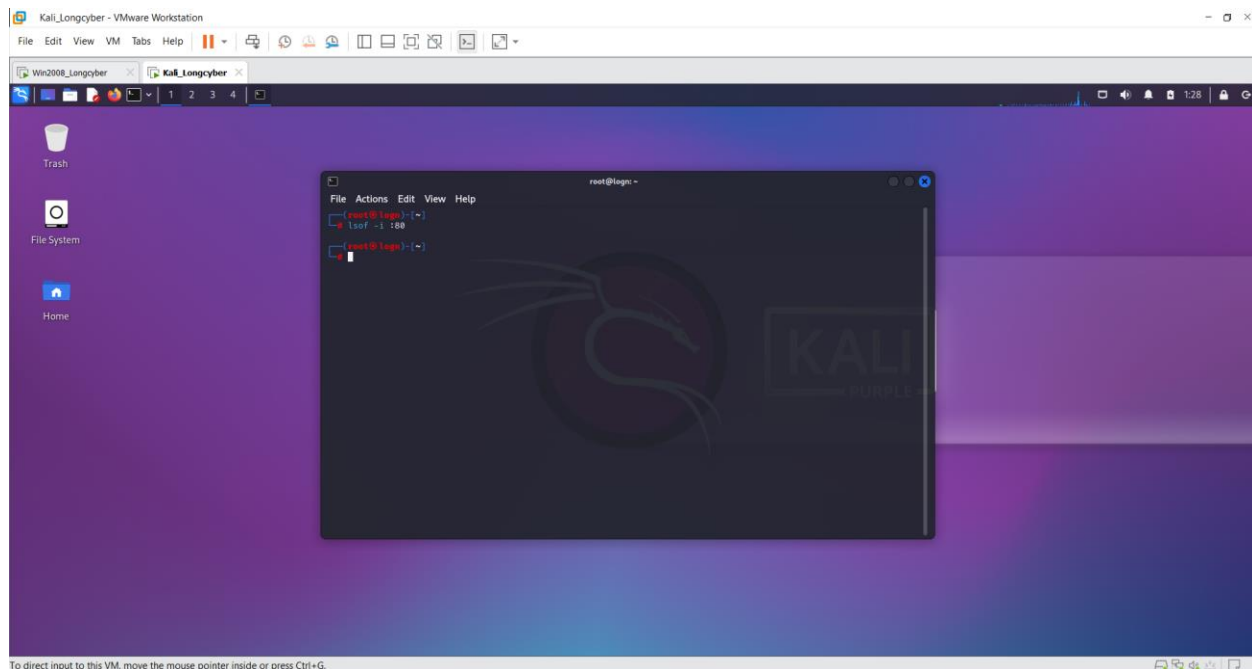
192.168.21.134



Checking for a Web server

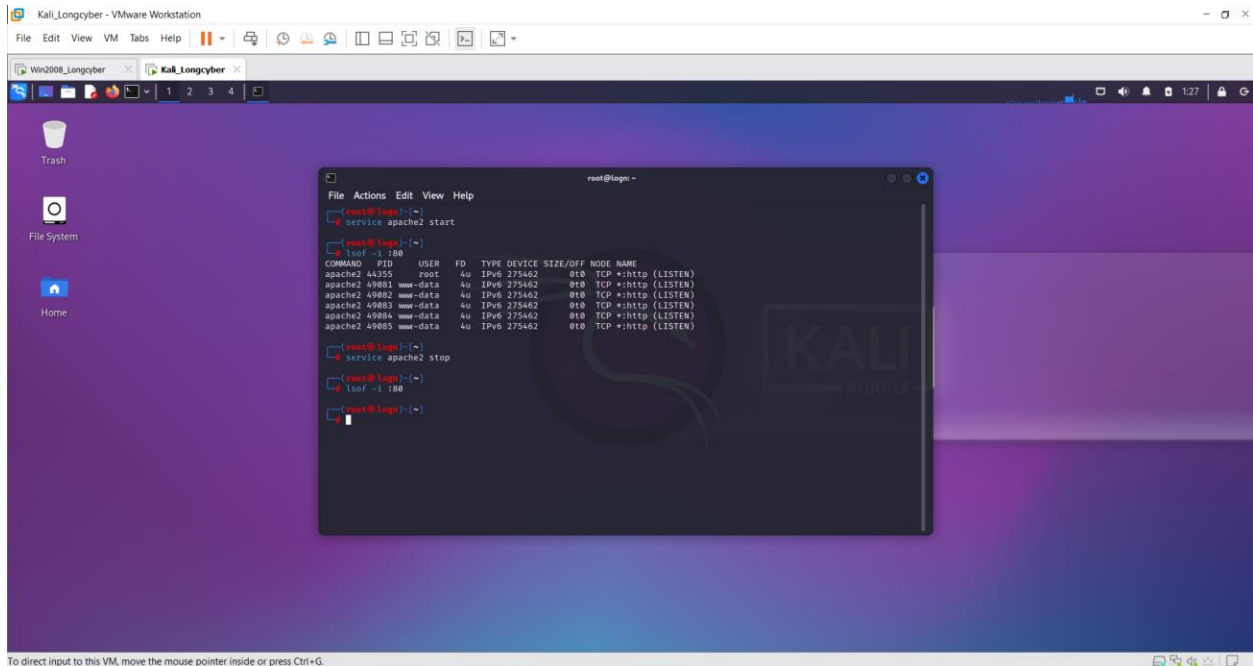
On your Linux machine, in a Terminal window, execute this command:

lsof -i :80



This command shows processes listening on port 80. If you see apache2 processes, as shown below, execute this command to stop apache:

service apache2 stop



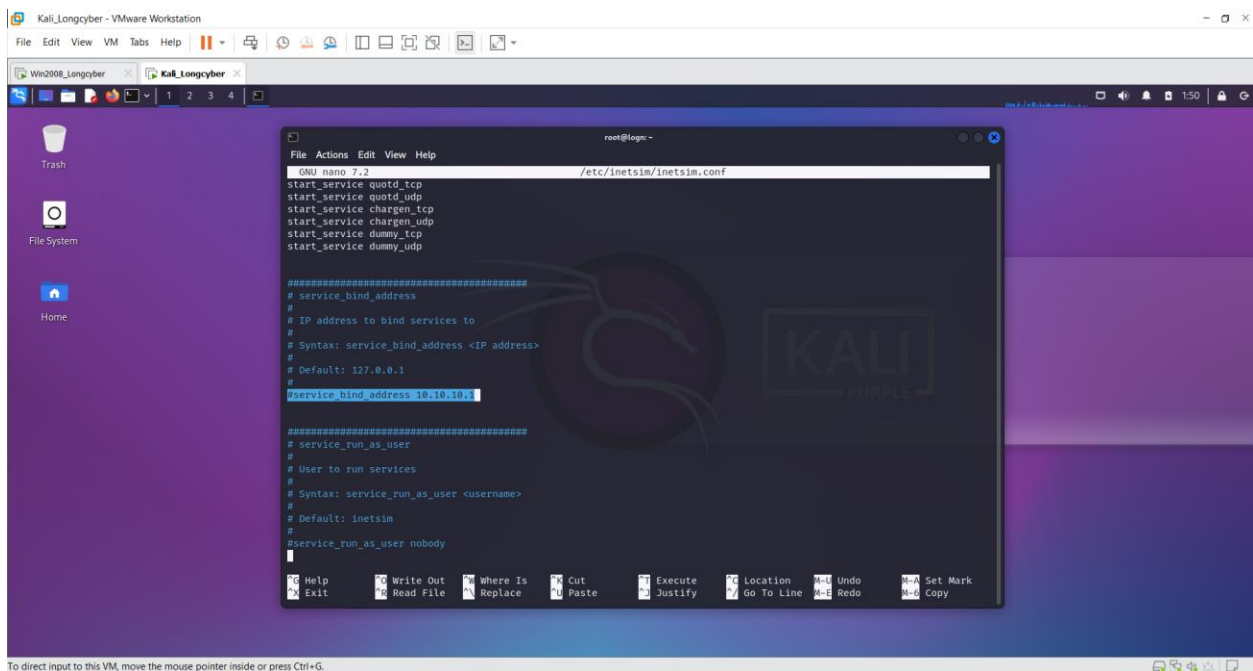
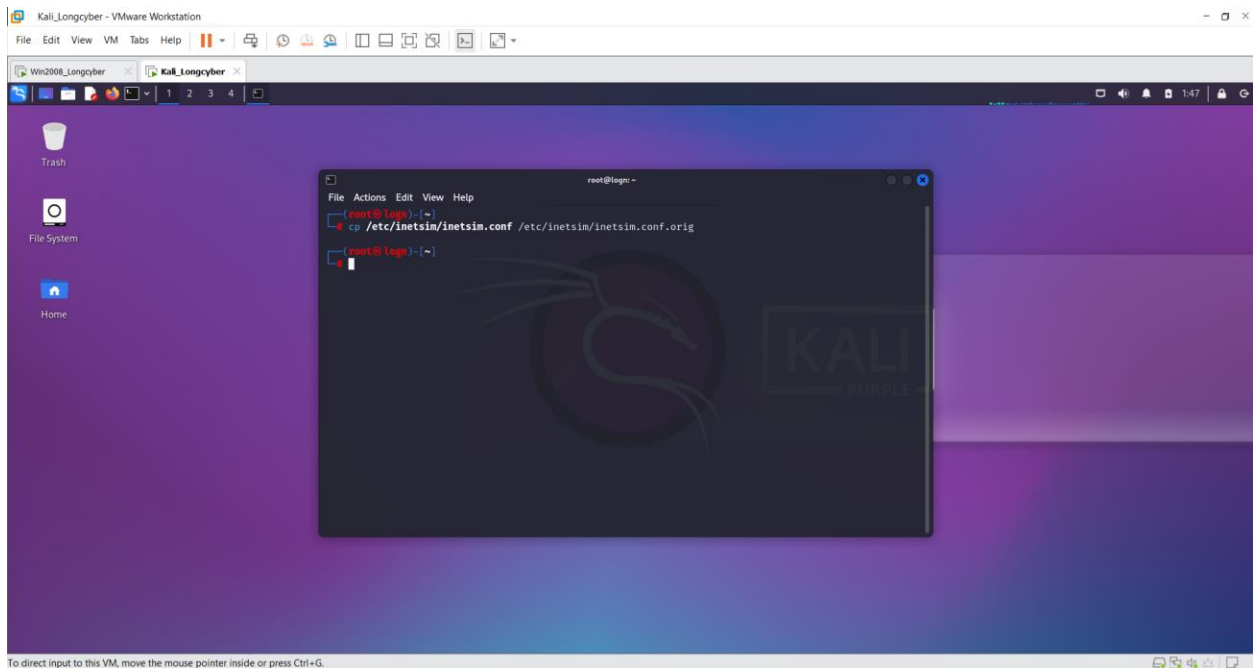
Configuring inetsim

inetsim is included in Kali Linux 2 already. But it needs some configuration. On your Linux machine, in a Terminal window, execute these commands:

cp /etc/inetsim/inetsim.conf /etc/inetsim/inetsim.conf.orig

nano /etc/inetsim/inetsim.conf

Scroll down about 3 screens. Find the **service_bind_address** section shown below. All these lines are comments because they start with the # character.



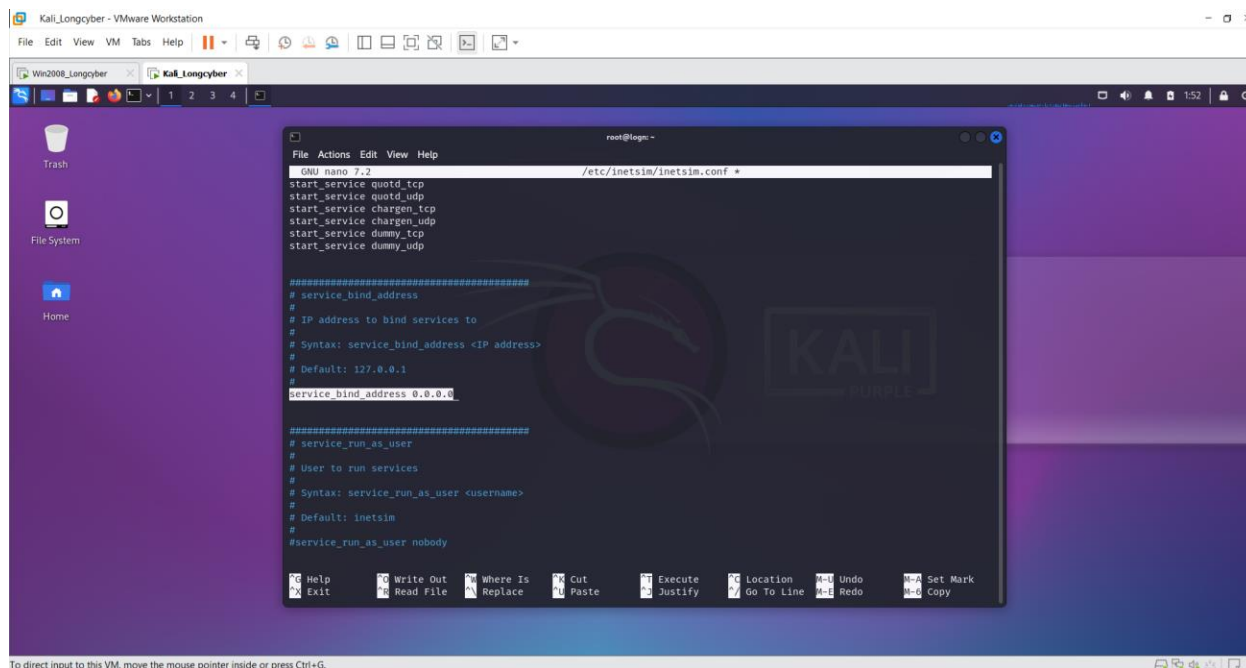
Change this line:

#service_bind_address 10.10.10.1

to this

service_bind_address 0.0.0.0

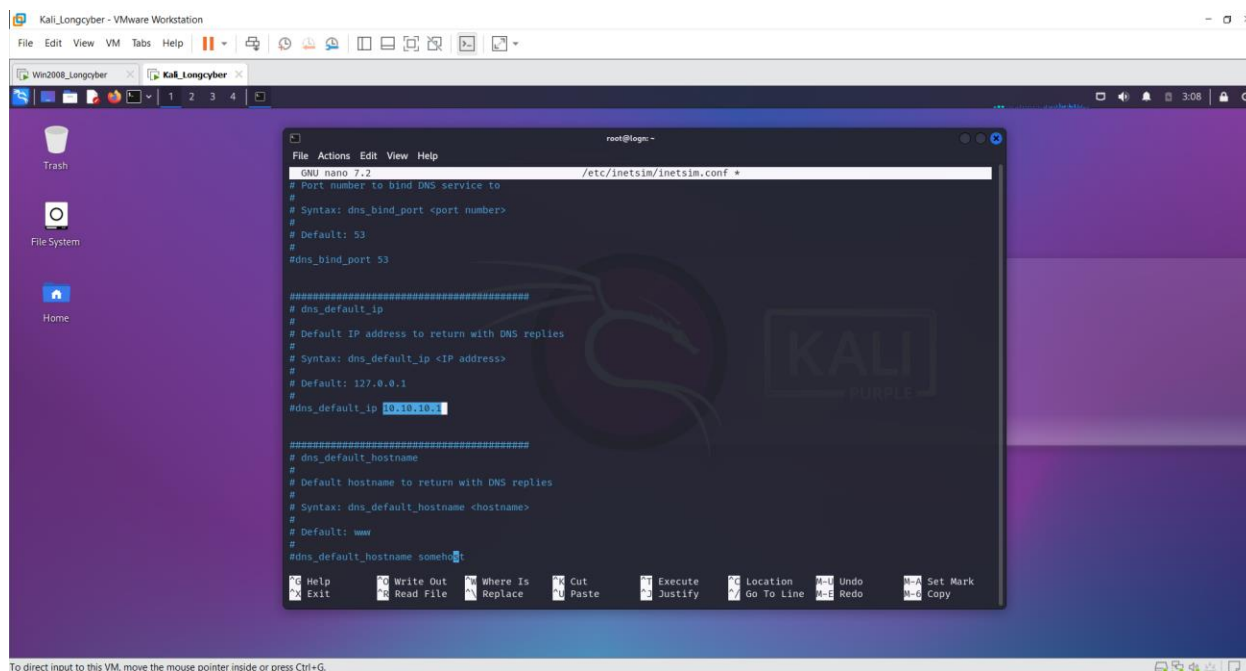
as shown below. This sets inetsim listening on all Kali's IP addresses.



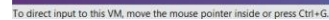
Don't forget to delete the # at the start of the line!

Scroll down another several screens to find the **dns_default_ip** section shown below. Find this line:

#dns_default_ip 10.10.10.1

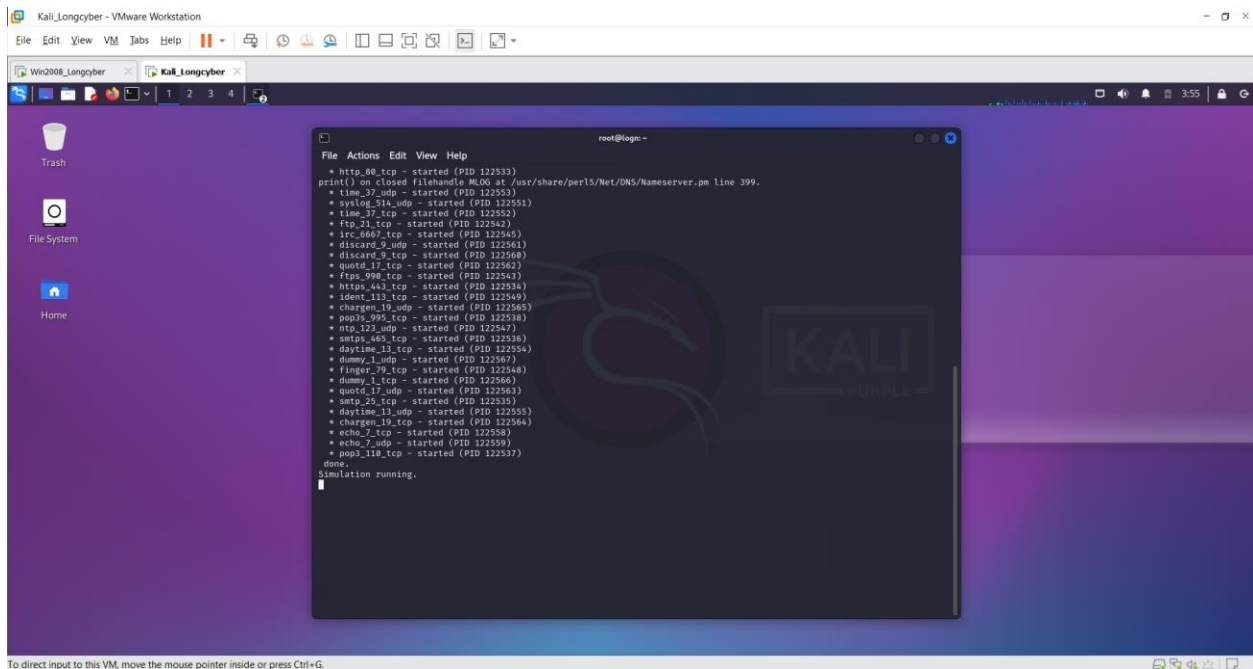
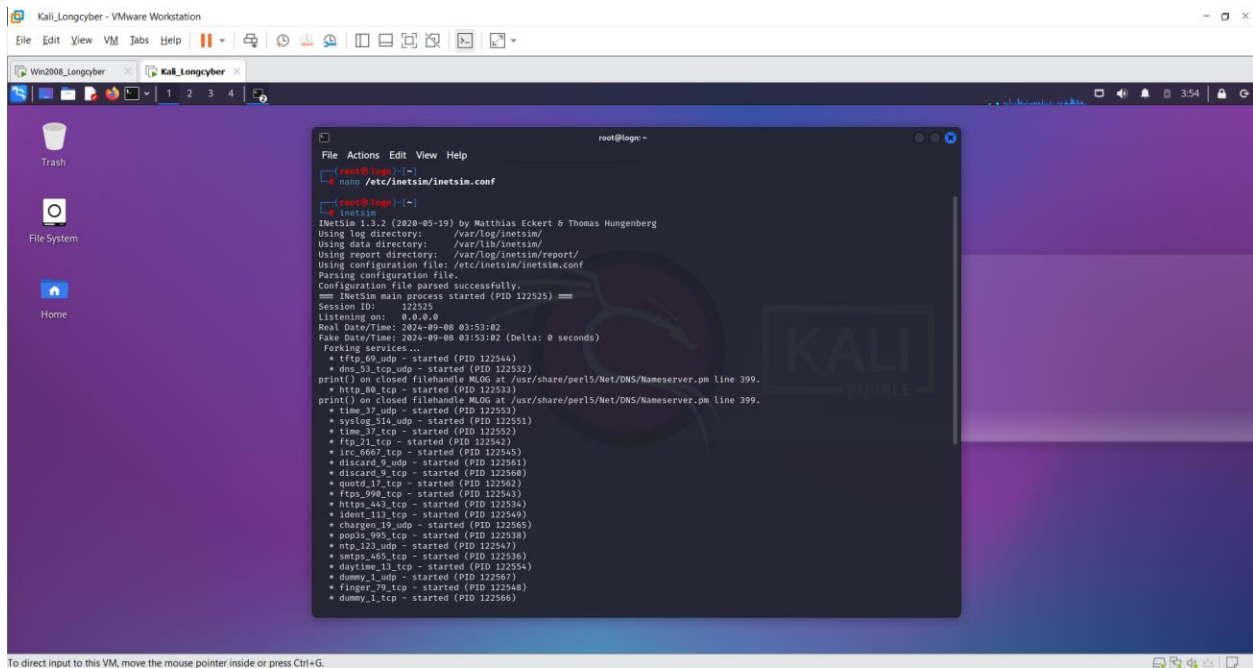


dns_default_ip 192.168.21.134



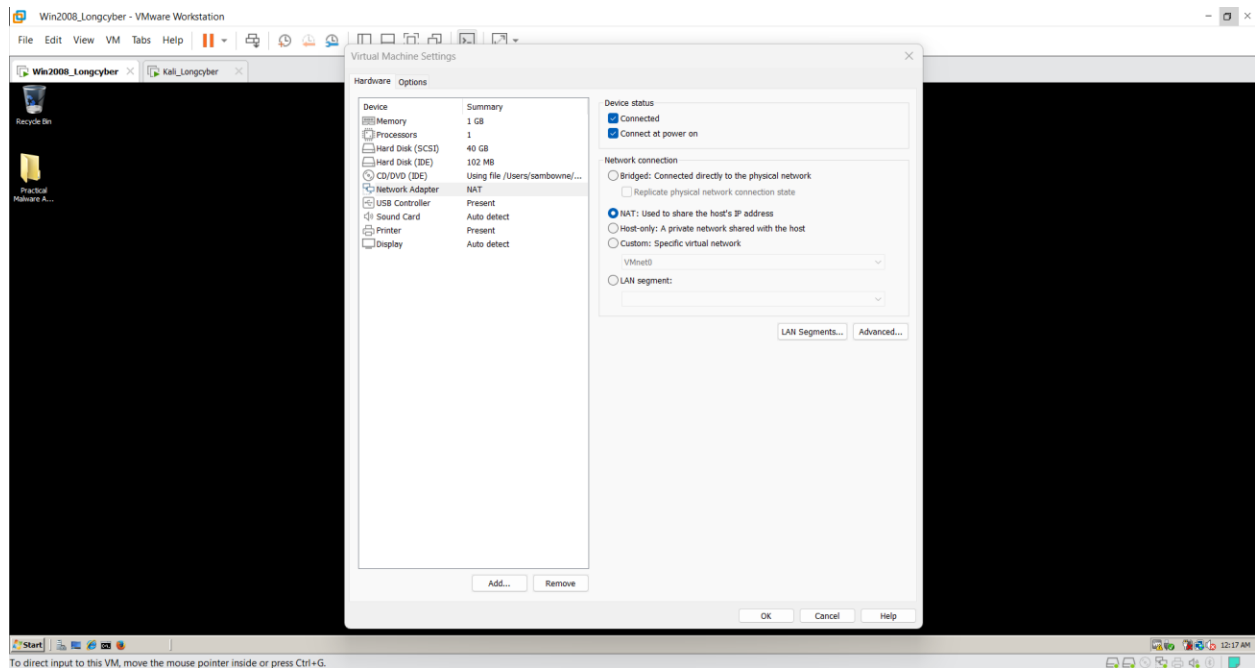
Save the file with **Ctrl+X, Y, Enter**.

Inetsim



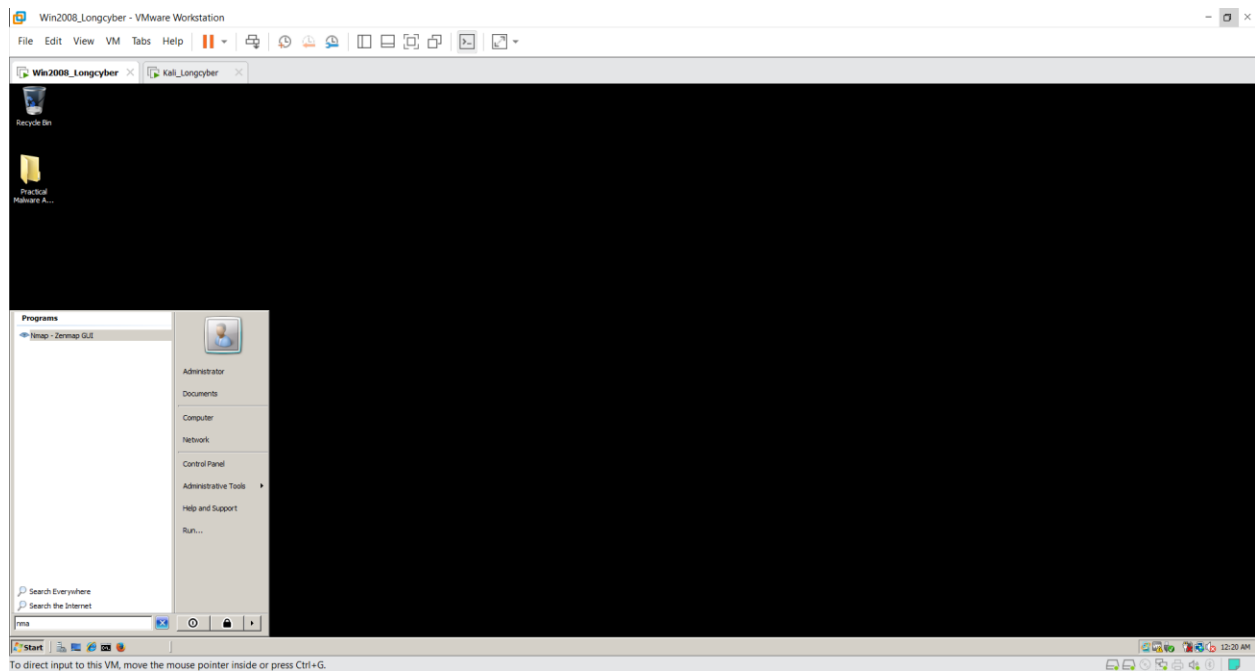
Start Your Windows VM

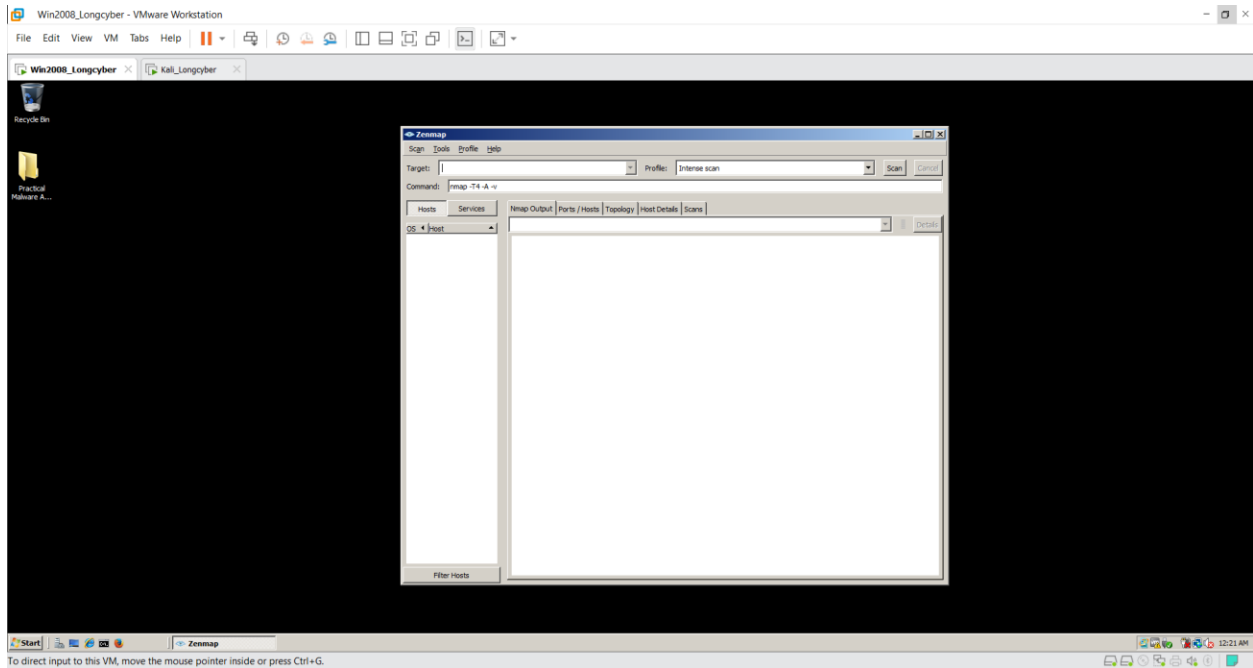
Start your Windows Server 2008 virtual machine, and set it to NAT networking.



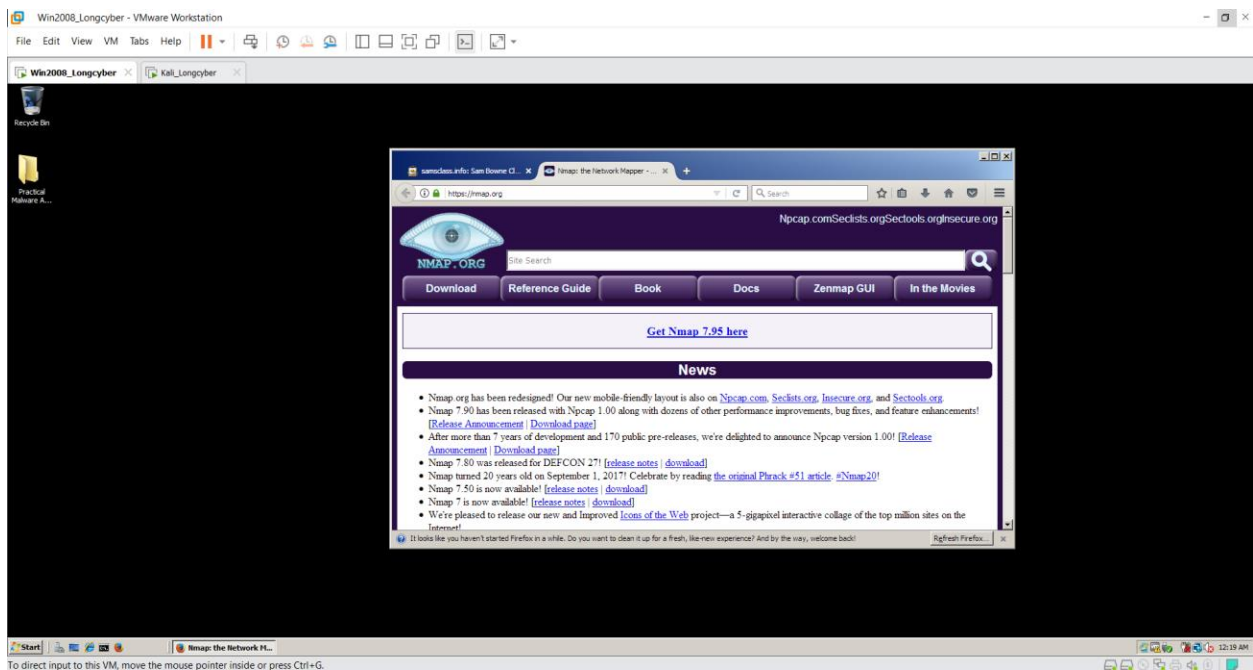
Installing Nmap

In your Windows Server 2008 virtual machine, click **Start** and look for Nmap. It should be there.



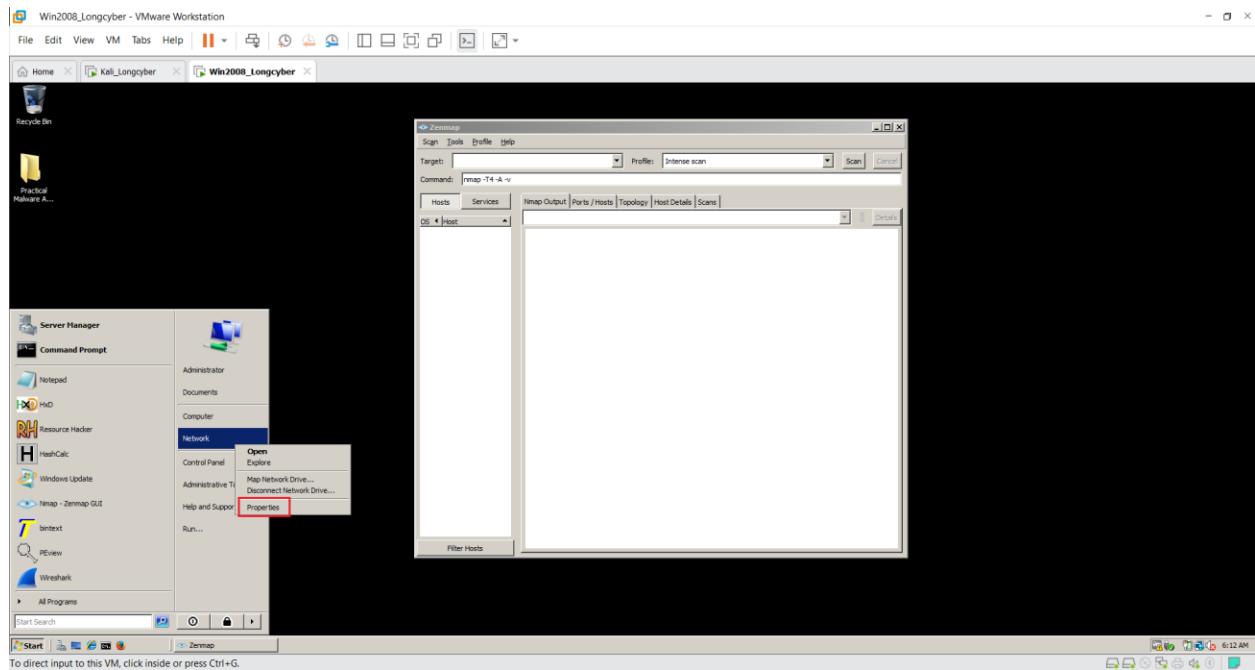


If not, open a Web browser and go to <https://nmap.org/> to get it.

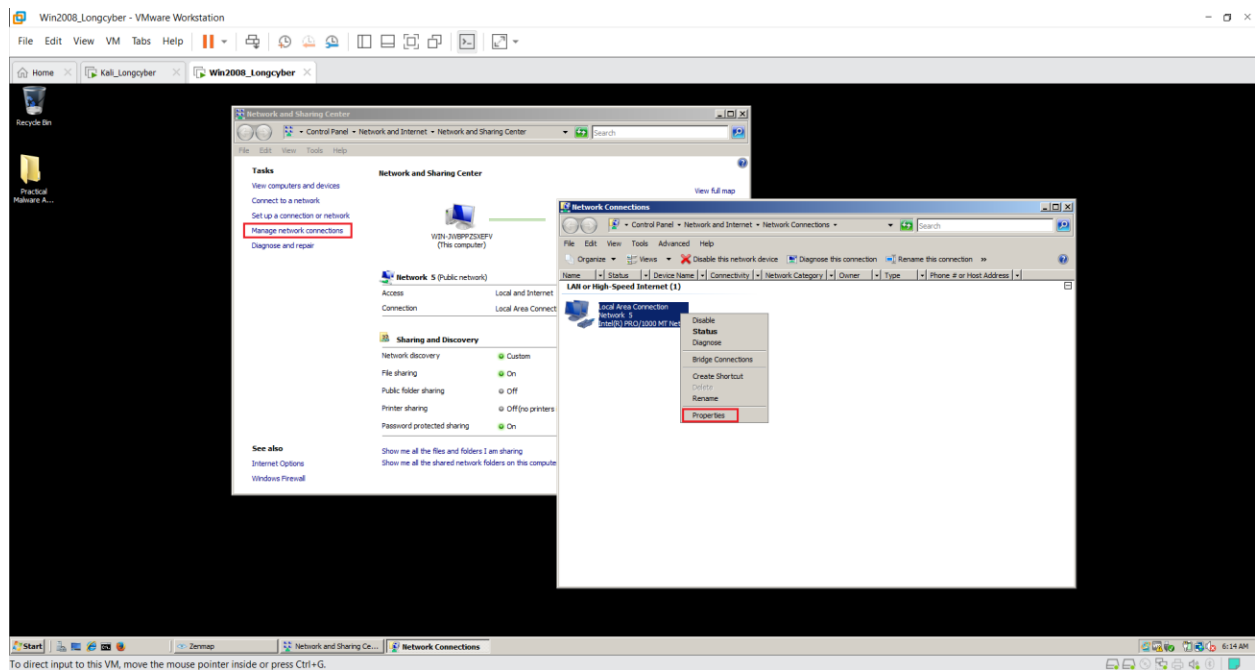


Setting the DNS Server

On your Windows VM, click **Start**. Right-click **Network** and click **Properties**.

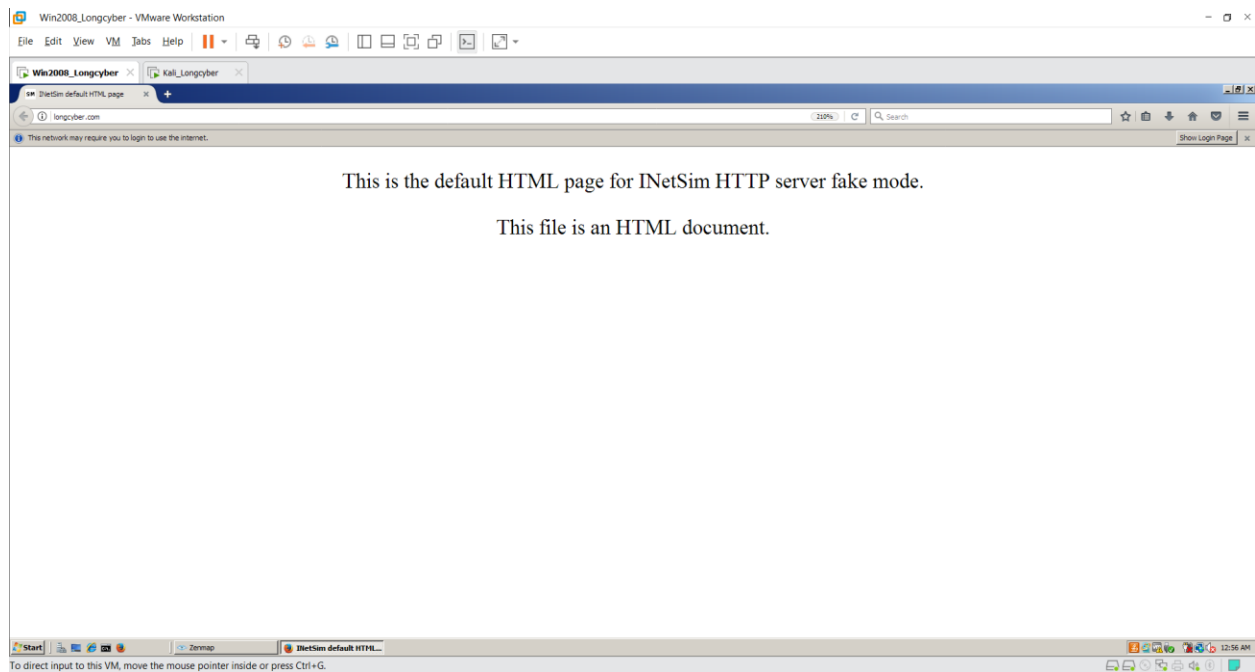


On the left side, click "Manage network connections". Right-click "Local Area Connection" and click **Properties**.



The screenshot shows a VMware Workstation interface with two virtual machines (VMs) running. The top VM, 'Win2008_Longcyber', is running and displaying the Windows Network Connections window. The 'Local Area Connection Properties' window is open, showing a list of installed network protocols. The 'Internet Protocol Version 4 (TCP/IPv4) Properties' window is also open, showing the 'Obtain an IP address automatically' option selected. The Kali_Longcyber VM is also running and displaying the same network configuration windows.

Open a Web browser on the Windows VM and go to this URL:
http://YOURNAME.com, replacing "YOURNAME" with your real name. You see
the INetSim default HTML page, as shown below:



Scanning YOURNAME.com

Start Nmap. Enter a Target of **YOURNAME.com**, replacing "YOURNAME" with your own name.

Click the **Scan** button.

You should see a lot of open ports, as shown below.

