OS Setup and Networking

ℹ️ How to set up Kali Linux Operating System and Network Configuration

Kali Linux OS Setup

After installing Kali Linux on your MicroSD, inserting it into the Raspberry Pi, and turning on the Raspberry Pi, you will be presented with a login screen:

Default Kali Linux username and login is:

Username: **Kali**

Password: **Kali**

Kali Linux Network Configuration

Now that you are logged in, you should have a desktop similar to this.

Feel free to familiarize yourself with the setup. Kali Linux by default has many networking and penetration testing tools preinstalled.

Next, open up the **Terminal** Application. You can find it in the top left of your screen

You will primarily be using the terminal for most Kali linux projects. The terminal is very similar to the MacOS terminal.
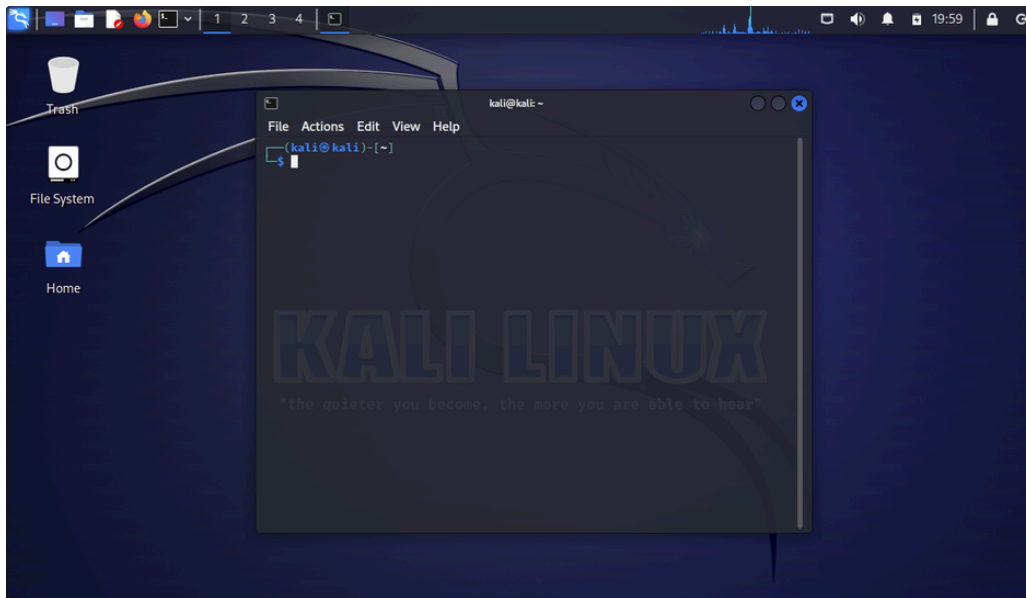
We will be configuring the network. The main command for this is:

```
1  ifconfig
```

This command is used to display network statistics. Used with other keywords, it can be used to configure the computer's network settings.

To configure a static IPv4 address, enter the following:

```
1  sudo ifconfig eth0 xxx.xxx.xxx.xxx netmask xxx.xxx.xxx.xxx
```

⚠️ Remember to replace the first set of x's with your IP address, and the second set with your subnet mask

For example:

```
1  sudo ifconfig eth0 192.168.56.2 netmask 255.255.255.0
```

Lets break down each piece of this command:

1. sudo
   a. The keyword "sudo" is used to grant admin access to the command line. You will notice a prompt to enter in your computer password (**kali**) after running the command.
2. ifconfig
   a. As explained above, ifconfig is an application used to display and configure a computer's network settings
3. eth0
   a. eth0 refers to the 0th ethernet port of the computer. Luckily for us, Raspberry Pis only include one ethernet port, so we will only ever use eth0.
4. netmask
   a. The keyword netmask is used to declare the subnet mask used.

After running the command above, enter

```
1  ifconfig
```

You should now see under **eth0** your configured IP address and subnet mask.
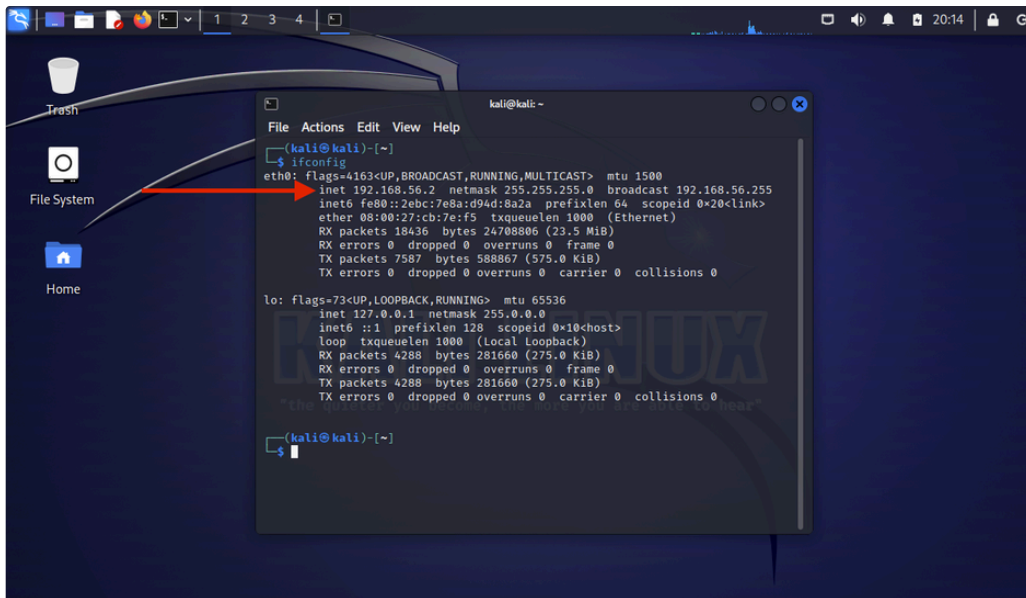
In order to actually communicate with another computer, we will need to do the same process again on the other computer. One important distinction is that we will need to assign an **unique** IP address to the second computer. For example

Computer 1:

```
1   sudo ifconfig eth0 192.168.56.2 netmask 255.255.255.0
```

Computer 2:

```
1   sudo ifconfig eth0 192.168.56.3 netmask 255.255.255.0
```

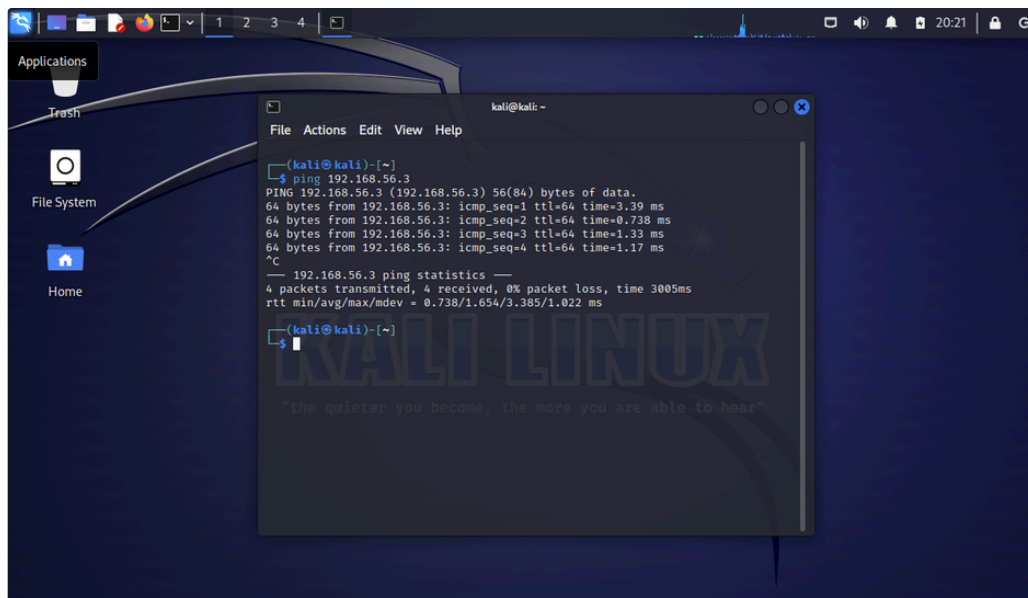Notice in Computer 2, we have assigned it the IP address 192.168.56.**3**

Assuming you have your IP addresses configured correctly, connect the two computers via ethernet cable and enter the command:

```
1   ping xxx.xxx.xxx.xxx
```

For example, if you are on Computer 1, with IP Address 192.168.56.**2,** you would enter:

```
1   ping 192.168.56.3
```

You should see a response similar to this:

To stop the ping, enter **CTRL + C**

If you see a failed attempt, you likely have entered or configured one or both of your IP Addresses incorrectly.