# Week 13 Linux Projects – Chapter 12 Network Configuration

Activities

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**How to Create Screenshots:** Please use the Windows Snip and Sketch Tool or the Snipping Tool. Paste a screenshot of just the program you are working on. If you are snipping a virtual machine, make sure your focus is outside the virtual machine before you snip.

1. Press and hold down the **Windows key** & **Shift**, then type **S.** This brings up the on-screen snipping tool.
2. Click and Drag your mouse around whatever you want to snip.
3. Release the mouse button. This places the snip into the Windows Clipboard.
4. Go into Word or wherever you want to paste the snip. Hold down **CTRL**, then type **V** to paste the snip.

## Update Kali Linux

In Kali Linux in the terminal.

|  |
| --- |
| sudo apt update  sudo apt dist-upgrade -y |

# Project 12-1: Static IP Configuration

Time required: 20 minutes

In this hands-on project, you explore the IP configuration of the network interface on your Linux. When you setup a server with any OS, you typically setup a static IP address

1. Start and login to Kali. Open a terminal session.
2. Type **nmcli connection show** 🡪 Press **Enter**. Note the name of your wired network interface.
3. Type **ip a** 🡪 Press **Enter**.
4. Does your network interface have an IP configuration? From where was this configuration obtained?

Click or tap here to enter text.

1. Let’s find our default gateway 🡪 **ip r** 🡪 Press Enter

Click or tap here to enter text.

1. In the GUI 🡪 Navigate to the **Kali** menu, 🡪 **Settings** 🡪 **Advanced Network Configuration**.
2. Click your **Wired connection** 🡪 Click the cog wheel settings icon at the bottom of the screen.
3. Go to the **IPv4 Settings** tab.
4. Select **Method** 🡪 **Manual**.
5. Supply an appropriate IP address, subnet netmask, default gateway, and DNS server information for your network. Click **Apply**.
6. Reboot your VM.
7. Go to your terminal prompt.
8. Ping **google.com**  
   You should receive a valid response. If not, check your network settings.
9. Insert a screenshot

Click or tap here to enter text.

1. Type **netstat -i** and press **Enter**. View the statistics for your network interfaces. If necessary, consult the netstat manual page to determine the meaning of each column displayed.
2. Insert a screenshot.

Click or tap here to enter text.

1. Type **exit** and press **Enter** to log out of your shell.
2. Go back to the Advanced Network Configuration and set the network settings back to **Automatic (DHCP)**.
3. Reboot your VM.

# Project 12-2: Host Name Resolution

Time required: 20 minutes

In this hands-on project, you view your host name as well as resolve host names and configure host name resolution.

1. Login to Kali.
2. Type **hostname** and press **Enter**.
3. What is your host name?

Click or tap here to enter text.

1. Type **cat /etc/hostname** and press **Enter**.
2. What host name is listed here? Why?

Click or tap here to enter text.

1. Type **cat /etc/resolv.conf** 🡪 press **Enter**.
2. Do you have a DNS server configured? What are the DNS addresses?

Click or tap here to enter text.

1. Edit the **sudo nano /etc/hosts** file Add a line to the bottom of the file that reads:



When finished, save your changes and quit the editor.

1. Type **ping fakehost.fadedomain.com** and press **Enter**.
2. Was the name resolved correctly?

Click or tap here to enter text.

1. Edit the **sudo nano /etc/hosts** file. Remove the line you added earlier.
2. Type **host www.kernel.org** and press **Enter**.
3. Insert a screenshot?

Click or tap here to enter text.

1. Type **nslookup www.kernel.org** and press **Enter**.

Click or tap here to enter text.

1. Type the command **dig www.kernel.org** and press **Enter**.
2. What additional information does dig provide compared to the nslookup and host utilities?

Click or tap here to enter text.