Ch 5. Networking- Online class 14 (05. 10. 20)

1. Network Protocol

Network protocol is the general rule or norm, the devices within a network must follow in naming and communicating information.

2. Main Protocols

a) TCP/IP (Transmission Control Protocol/ Internet Protocol)
b) SSH (Secure SHell Protocol)
c) SMB (Server Message Block)
d) POP (Post Office Protocol)
e) HTTP(Hyper Text Transfer Protocol)
f) DHCP(Dynamic Host Configuration Protocol)
g) FTP(File Transfer Protocol)
h) SMTP(Simple Mail Transfer Protocol)

3. IP Address

The number (address) used to identify computers in a network is called the IP address.

This is provided on the basis of TCP / IP.

4. Protocols used for giving the IP address

Protocols in two versions, IPv4 and IPv6

In IPv4, address with the size of 32 bit (4 parts of 8 bit size)

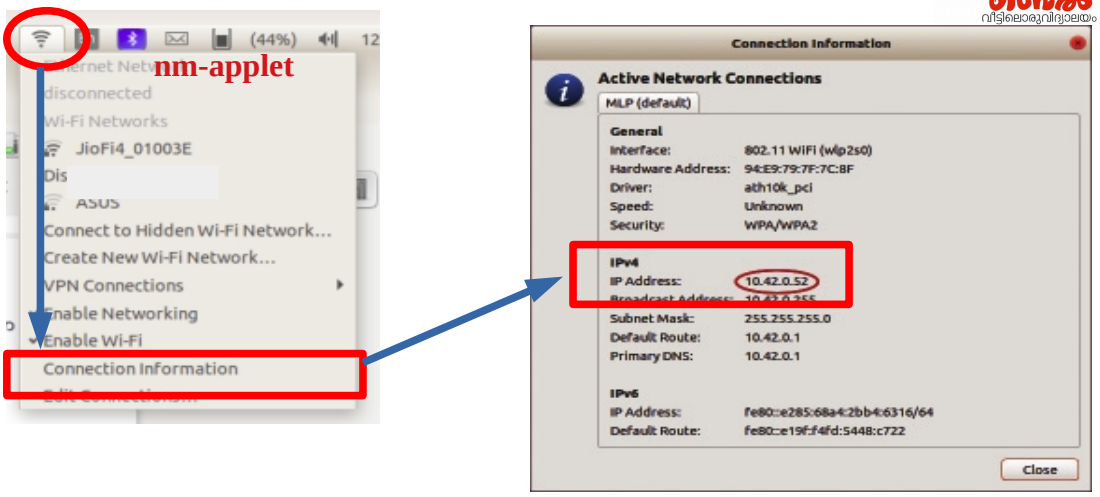
and in IPv6, address with the size of 128-bit are used

5. Structure of the IP address according to IPv4.

- 32 bit size
- 4 parts of 8 bit size
- First 3 parts refers to the network and the last part refers to the computer

6. Determining IP address

Click **nm-applet** and select **Connection Information**. We can see the IP address



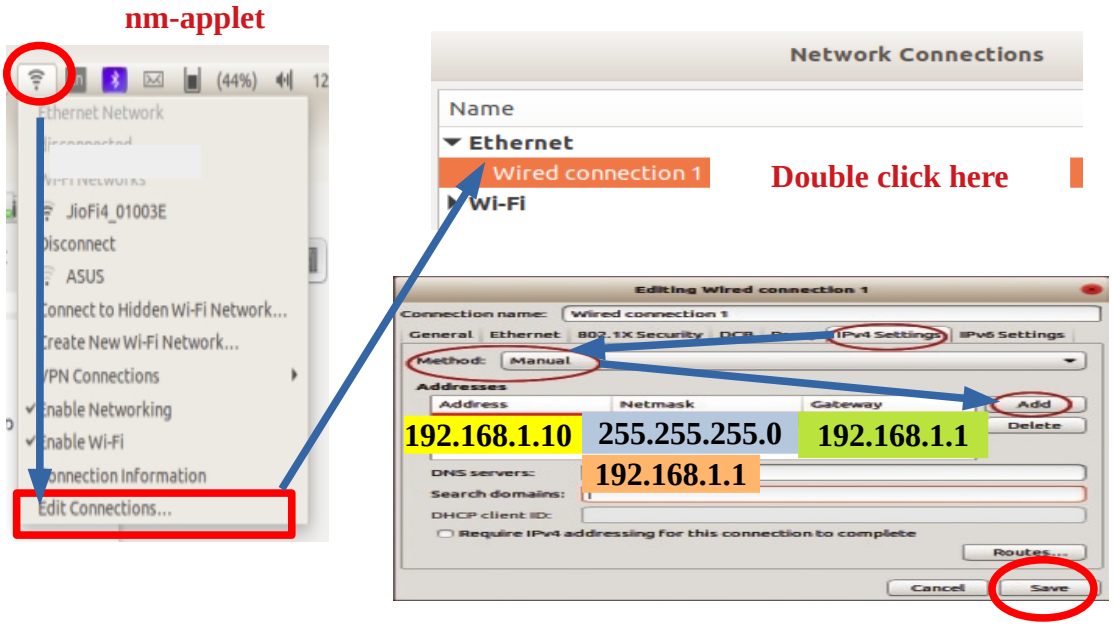
7. DHCP (Dynamic Host Configuration Protocol)

The technology that gives an IP address automatically is known as Dynamic Host Configuration Protocol (DHCP)

Each computer that enters the network is given an IP address in that order by DHCP.

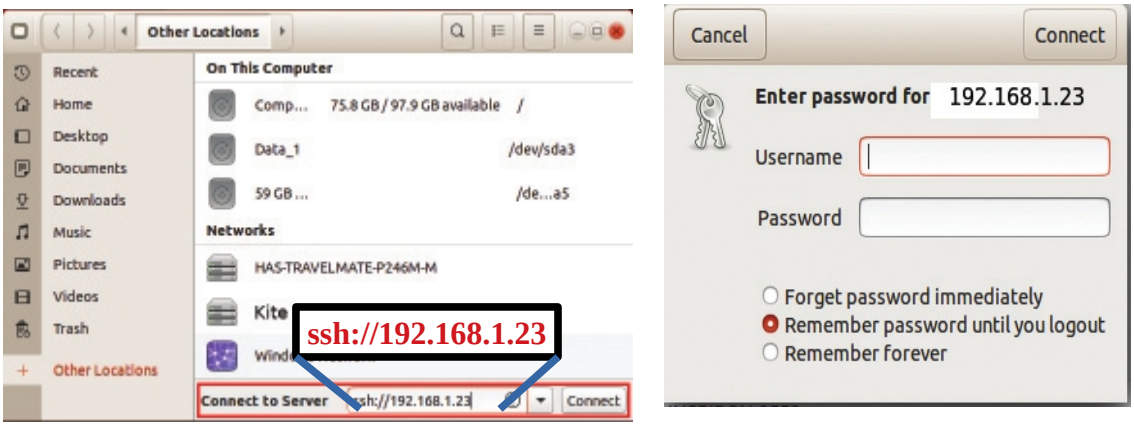
8. Method of giving a permanent IP address to the computer

- Click **nm-applet** and select **Edit Connections**.
- Double-click the connected network (Ethernet - Wired connection).
- In the window that appears, select **Manual** in the **Method** option of **IPv4 settings** and click **Add**.
- Enter 192.168.1.10 in Address, 255.255.255.0 in Netmask , 192.168.1.1 in Gateway, 192.168.1.1 in DNS servers and then save.
- When it asks for a password, give the administrator pass word



9. How to transfer a file from one computer to another on the same network

- Click in the order Places ⟶ Network ⟶ Other Locations
- Enter the IP address of the computer (in the form of **ssh://192.168.1.23**) in which the file is kept,under **Connect to server** in the window that opens.
- When asked, enter the username and password of the computer to which connection has to be made



This transfer is done according to SSH Protocol (Secure SHell Protocol).

10. How to share the printer through network

- Activate the network.

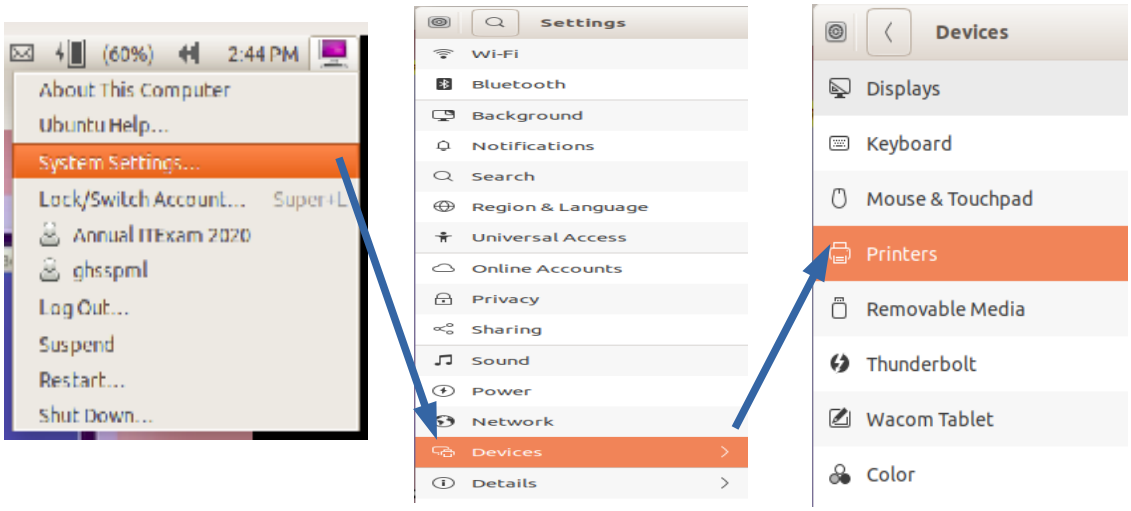
- In the computer connected to a printer, open the window in the order

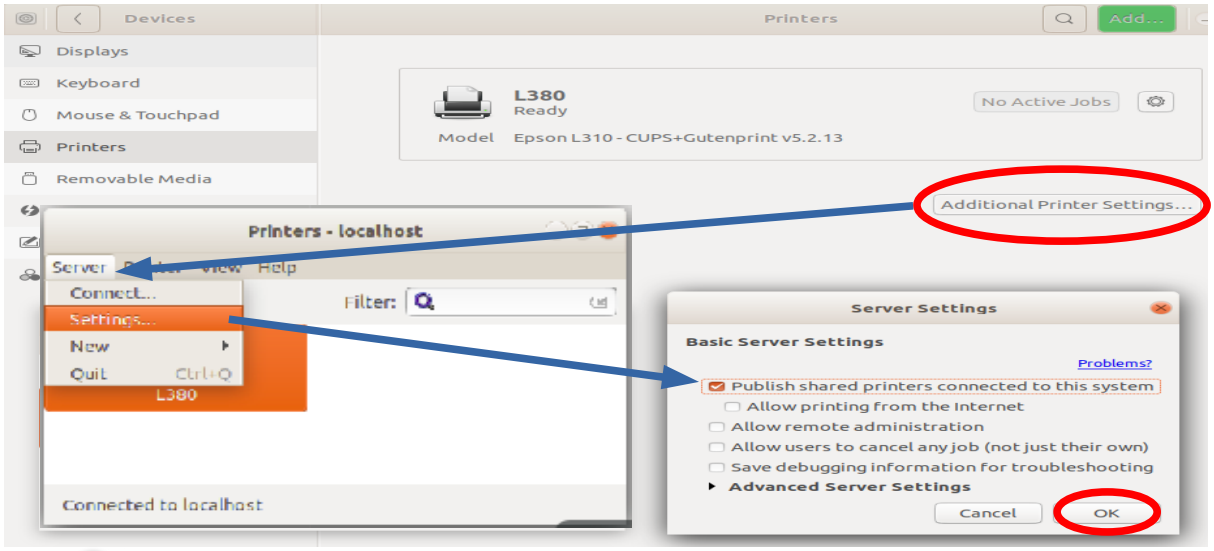
  System settings ⟶ Devices ⟶ Printers

- In the window that appears when clicking

  Additional Printer Settings ⟶ **Server** ⟶ **Settings**, select **Publish shared printers connected to this system** and then Click **OK**

- After restarting the computers, open the Printers window. The shared printer could be seen in all the computers





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