

06/08/24

## Practical - 4

**AIM:-** Setup and configure a LAN (Local Area Network) using a switch & Ethernet cable in your Lab.

**What is LAN?**

A Local Area Network (LAN) refers to a network that connects devices within a limited area, such as an office building, school or home. It enables users to share resources, including data, printers & internet access.

**How to Setup LAN:-**

**Step 1:-** Plan and design an appropriate network topology taking into account network requirement and equipment locations.

**Step 2:-** You can take 4 computers, a switch with 8, 16, or 24 ports which is sufficient for networks of these sizes, & a 4 Ethernet cables.

**Step 3:-** Connect your computers to network switch via an Ethernet cable, which is as simple as plugging one end of the Ethernet cable into your computer & the other end into your network switch.

Step 4:- Assign IP address to your PC

→ 1. Log on to the client computer as Administration or as owner.

→ 2. click network & Internet connection

→ Right click LAN { Ethernet } Go to properties → select Internet protocol click on properties → select use the following IP address option & assign IP address.

→ Similarly assign IP address to all the PC's connected to switch

PC1-IP address: 10.1.1.1, subnet mask

PC2-IP address: 10.1.1.2, subnet mask 255.0.0.0

255.0.0.0

Step 5:- Configure a network switch:

1. Connect your computer to the switch. To access the switch's web interface, you will need to connect your computer to switch using an Ethernet cable.

2. Log in to Web interface: open a web browser and enter the IP address of the switch in the address bar. This should bring up the login page for the switch's web interface. Enter the username & password to log in.

3. Configure basic settings: once you're logged in, you will be able to configure basic settings for the switch.



4. Assign IP address as 10.1.1.5, Subnet mask 255.0.0.0

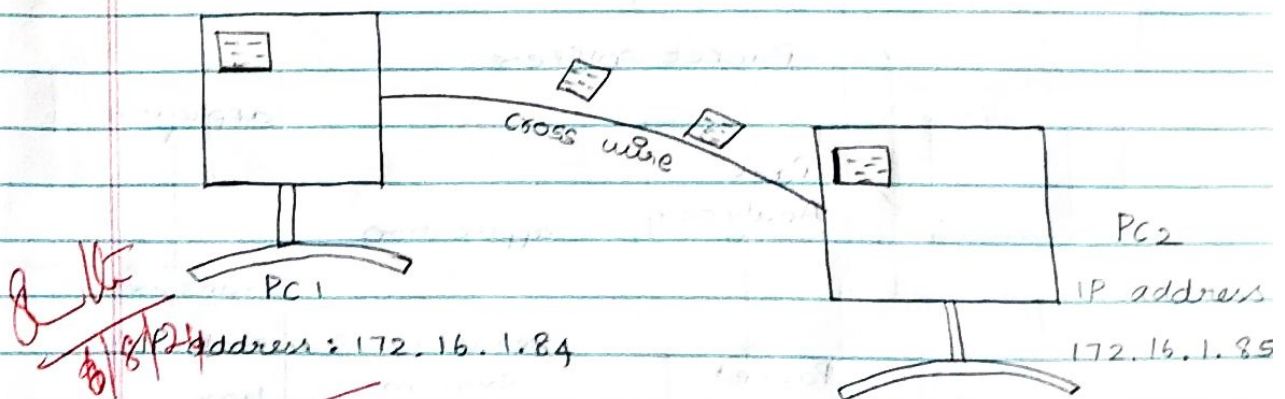
Step 6: ... check the connectivity between <sup>-td</sup> ~~su~~ & other machine by using ping command in the command prompt of the device.

Step 7: ... Select a folder → go to properties → click sharing tab → share it with everyone on the same LAN.

Step 8: ... Try to access the shared folder from other computers of the network.

Student observation: ...

Draw a neat diagram of the LAN at configuration or observation book that you have implemented in your lab, write the IP configuration of each & every device, write the outcome & challenge faced while configuring the LAN.



Result: ... Thus setup & configure a LAN (Local Area Network) using a switch & Ethernet cable is connected.