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PRACTICAL - 4

AIM:

Setup and configure a LAN using a switch & Ethernet cables in your Lab.

What is a 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. LAN connects devices to promote collaboration & transfers information between users, such as computers, printers, servers and switches. A local area network (LAN) switch servers as the primary connecting device, managing and directing communication within the local network. Each connected device on a LAN switch can communicate directly with each other's allowing the task & secure data transfer.

How to set up a LAN

Step 1: Plan and Design an appropriate network topology taking into account network requirements & equipment location.

Step 2: You can take 4 computers, a switch with 8, 16 or 24 ports which is sufficient for network of these sizes & 4 ethernet cable.

Step 3: Connect your computers to network Switch via an ethernet cable, which is as simple as plugging one end of ethernet cabb into your computer & other end into your network Switch.

Step 4: Assign IP Address to your Pc's
1. Log on to the client computer as Administrator or as occur.
2. Click Network and Internet connections.
3. Right click local Area connection / Ethernet → Go to properties → Select use of the following IP addres option and assign IP address.

Similarly assign IP address to all the Pc's connected to switch
PC1 - IP address : 10:1.1.1 , Subnet mask 255.0.0.0
PC2 - IP address : 10.1.1.2, Subnet mask 255.0.0.0
PC3 - IP address : 10.1.1.3, Subnet mask 255.0.0.0
PC4 - IP address : 10.1.1.4, Subnet mask 255.0.0.0

Step 5:
    Configure a network Switch
1. Connect your computer to the switch. To access the switch using an ethernet cabb
2. Log in to the web interface: Open a webbrowser & enter the IP address of the switch in the address bar. This should bring up the login Page for the switch's Web interface.

3. Configure Basic settings: Once you're logged in you will be able to configure basic settings for the switch.
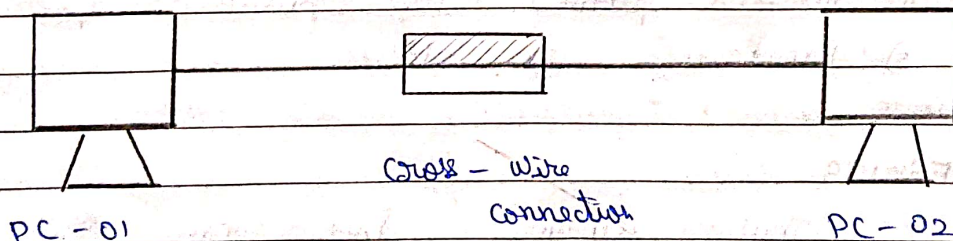
4. Assign IP address the connectivity as 10.1.1.5, subnet mask 255.0.0.0

Step 6. : check the connectivity b/w switch and other machine by using

Step 7 : Select a folder → go to → properties → Click sharing → share it with everyone on the source LAN.

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

Student observation

PC - 01   Cross - wire   PC - 02
                           connection

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Result

Thus we setup an configure an LAN using a switch & Ethernet cables in our Lab