

5/8/24

Aim:

Setup & configure a local Area Network using a switch & ethernet cables in your lab.

What is LAN:

A local Area Network refers to a network that connects device 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 & transfer information between users such as printers, servers & switches. Each directed connected device on a LAN switch can communicate directly with each other, allowing for fast & secure data transfer.

How to Setup a LAN?

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



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

Step-3: connect your computers to network switch via an ethernet cable, which is 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 PCs.

1) Log on to the client computer as administrator or as owner

2) click network & internet connections

3) Right click local area connection / ethernet → go to properties → select IP (TCP/IPv4) → click

on properties - select use the following IP addresses option & assign IP address.

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 the switch using an ethernet cable.



2) Log into the web interface: open a web browser & 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 username & password to login.

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

4) Assign IP address A.S: 10.1.1.5, Subnet mask 255.0.0.0

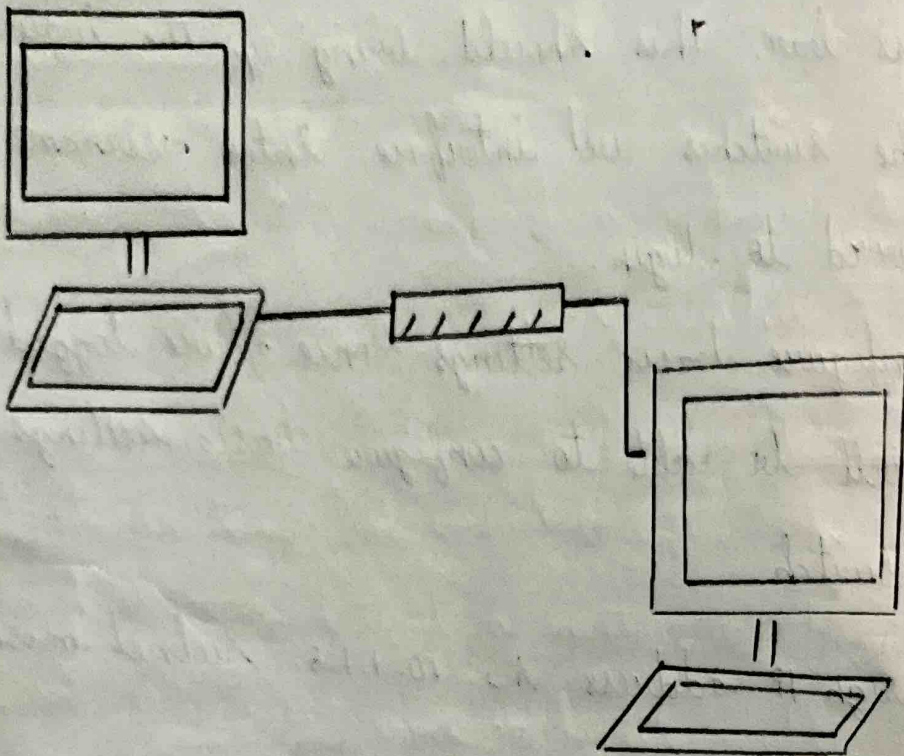
Step-6: check the connectivity between switch & other machine by using ping command in command prompt by the device

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 others computers to the network.



## Student observation:



## Result:

Thus the setup & configure of LAN is studied & observed.

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