

AIM: Setup and configure a LAN (Local area network) using a Switch and 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 office building, school, or home. It enables users to share resources, including data, printers, and Internet access.

How to set up a LAN

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

Step - 2: you can take 4 computers, a switch with 8, 16, or 24 ports which is sufficient for networks of these sizes, and 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 and 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 and Internet Connections.
3. Right click Local Area Connection / Ethernet → go to properties → select Internet Protocol (TCP/IPv4) → click properties → select ip address option and assign ip address.

Step - 5: Configure a network switch:

1. Connect your computer to the switch.
2. Log in to the web interface.
3. configure basic settings.
4. Assign IP address as

Step - 6: Check the connectivity between switch and other machine by using ping command in the command prompt of the device.

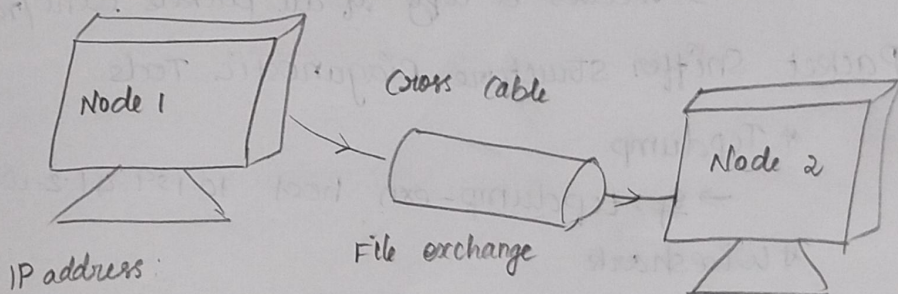
Step - 7: Select a folder, → go to properties → click sharing tab → share it with everyone on the same LAN.

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

Observation:

Draw a diagram of LAN in the configuration observation book. that you have implemented in your lab. write the ip configuration of each 2 energy device. write the outcome and challenge faced while configuring the LAN.

Diagram of the LAN:



IP address:

172.16.8.82

IP configuration:

Node - 1:

IPv4 Address: 172.16.8.82

Node - 2:

IPv4 address: 172.16.8.83

IP address:

172.16.8.83

Outcome:

The file that sent that through [click Run: [//172.16.8.83] → users\\REC\\Desktop] is sent successfully.

RESULT:

Thus, the set up LAN is using switch and Ethernet cables is successfully connected and sent files.