

Aim: Setup and Configure a LAN (Local Area network) using a Switch and ethernet cables in your lab.

What is LAN?

A local area network refers to a network that connects devices with limited area, such as an office building, school, or home. It enables users to share resources, including data, printers, and internet access. LAN connects devices to promote collaboration and transfer information between users such as computers, printers, servers, and switches. Each device connected on a LAN switch can communicate directly with each other, allowing for fast and secure transfer.

How to Setup 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 and 4 ethernet cables.

Step 3: Connect your computers to network switch via an ethernet cable which is simple as plugging one end of an ethernet cable into your computer and the other end into your network switch.

Step 4: Assign IP address to your PC

- i) log on to the client Computer as administrator or as owner.
- ii) click network and Internet Connections.
- iii) Right click local area Connection (Ethernet) → Go to properties → Select Internet protocol (TCP/IPv4) → Click on properties → Select use the following IP address option and assign IP address.

Step 5: Configure a network switch

- i) 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.
- ii) log into the 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.
- iii) Configure basic settings: once you're logged in, you will be able to configure basic settings for the switch.

Step 6: check the Connectivity between Switch and other machine by using ping Command in the Command prompt of the device

Step 7: Select folder → go to properties → Click sharing tab → Share it with everyone on the same LAN

Step 8: Try to access the shared folders from others computers of the network

Student observation:



Result:

Thus the Setup and Configure of LAN is Shown and observed

Done
 10/8/24