

28/8/25

PRACTICAL - 4

AIM:

Setup and Configure a LAN using a switch and Ethernet cable in your lab.

What is LAN?

A LAN refers to a network that connects devices to a limited area such as office building, school or home. It enables users to share resources, including data, printers and internet access. LAN connects devices to promote collaborations and transfer information between users, such as computers, printers, servers and switches.

How to setup 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, 24 ports which is sufficient for these sizes and 4th Cable

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

Step 4: Assign IP address to your PCs

1) Log on to the client computer as Admin

2) Click Network and Internet connection

3) Right click Local Area Connection

→ go to properties

Select Internet protocol → click on properties

Select use the following IP address option and assign IP address.

Similarly assign IP address to all the PCs 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

PC 4 - 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's web interface, you will need to connect your computer
2. Log in to 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.
3. Configure basic settings. Once you 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 switch and other machine by using ping command in the command prompt of the device.

Step 1 : 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.

RESULT:

Thus LAN network was setup successfully
in the LAB.