

EXPERIMENT - 4 Experiment on Setting up & configuration  
28/8/25 a LAN using a switch & Ethernet cables.

AIM: Setup and configure a LAN using a switch and Ethernet cables 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 a limited area or home. It enables users to share resources including data, printer and internet access. LAN connects devices to promote collaborations and transfer information between users, such as computers, printer, 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 or 24 ports, which is sufficient for these sizes and 4 Eth cables.

Step 3: Connect your computer to network switch via own Eth cable, which is as simple as plugging one end of the Eth cable into your computer.

Step 4: Assign IP address to your PCs

1. Log on to the Client comp 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

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'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 have 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 7: Select a folder  $\rightarrow$  Go to properties  $\rightarrow$  Click sharing tab  $\rightarrow$  Share it with everyone on the same LAN.

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

EXPERIMENT:

Diagram of Lan 1 to configuration observation.

