03/08/24

PRACTICAL 4

AIM:

To setup & configure a LAN (Local Area Network) using a switch & ethernet cables in your lab.

LAN (Local Area Network) refers to a network that connect devices within a limited area, such as an office building, school or home. Each connected device on LAN switch can communicate directly with each other, allowing for fast & secure data transfer.

How to Set up a LAN:

① Plan & design an appropriate network topology taking into account network requirements & location.

② You can take 4 computers; a switch with 8, 16, /24 & 4 ethernet cables.

③ Connect your computers to network switch via ethernet cable, plugging it into computer.

④ Assign IP Address to your PC:
① Login to the client computer as Administrator or as owner.
② Click network & internet connections
③ Right click Local Area connection
→ Go to properties → Select Internet protocol — click on properties → select use the following ip address option & assign ip address.

control panel > Network & Internet > Network conn>
Networking/ Sharing
IP version 4 (TCP/IPV4) properties
  o Obtain van IP address automatically
  ⊙ Use the following IP address
  IP address   [10·1·1·1]
  Subnet mask   [255·0·0·0]
  Default gateway [· · ·]
  ⊙ Use the following DNS server addresses
  Preferred DNS server   [· · ·]
  Alternate DNS server   [· · ·]
  ☐ Validate settings upon exist
                              [Advanced]

Similarly assign IP address to all the
PCs connected to switch.
  PC1 − IP Address : 10·1·1·1, subnetmat 255·0·0·0
  PC2 − IP Address : 10·1·1·2, subnet 255·0·0·0

⑤ Configure a network switch:
  1. Connect your computer to a switch:
To access the switch's web interface, you
will need to connect your computer to the
switch using Ethernet cable.
  2. Log in to web interface: Open a web
browser & enter the IP address of switch
In the address bar.
  3. Configure basic settings: once logged
in, you will be able to configure basic
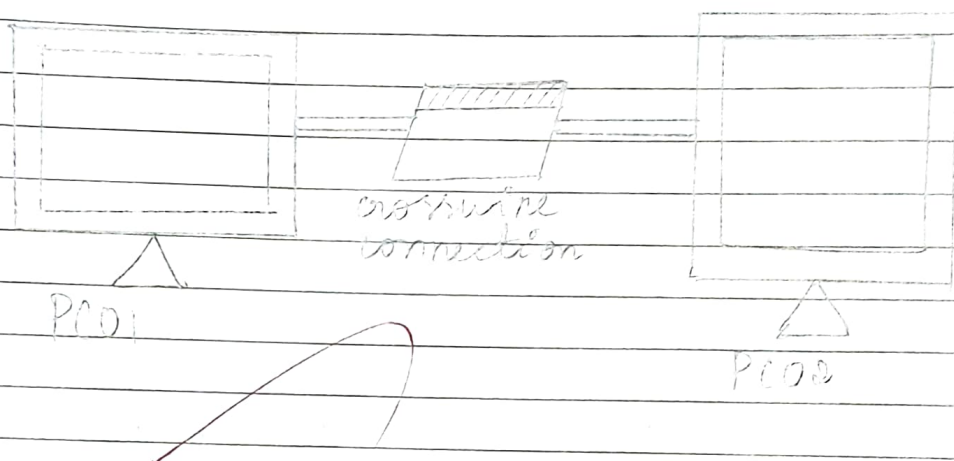settings for switch:
  4. Assign IP address as 10·1·1·5,
subnet mar 285·0·0·

⑥ check connectivity between switch & other machine by using ping command in the command prompt of the device.

⑦ Select a folder → go to properties → click sharing tab → share it with everyone on the same LAN

⑧ Try to access shared folder from other computers of network.

PC01   machine connection   PC02

RESULT:
To setup & configure a LAN using a Switch & ethernet cables.

7/8/14