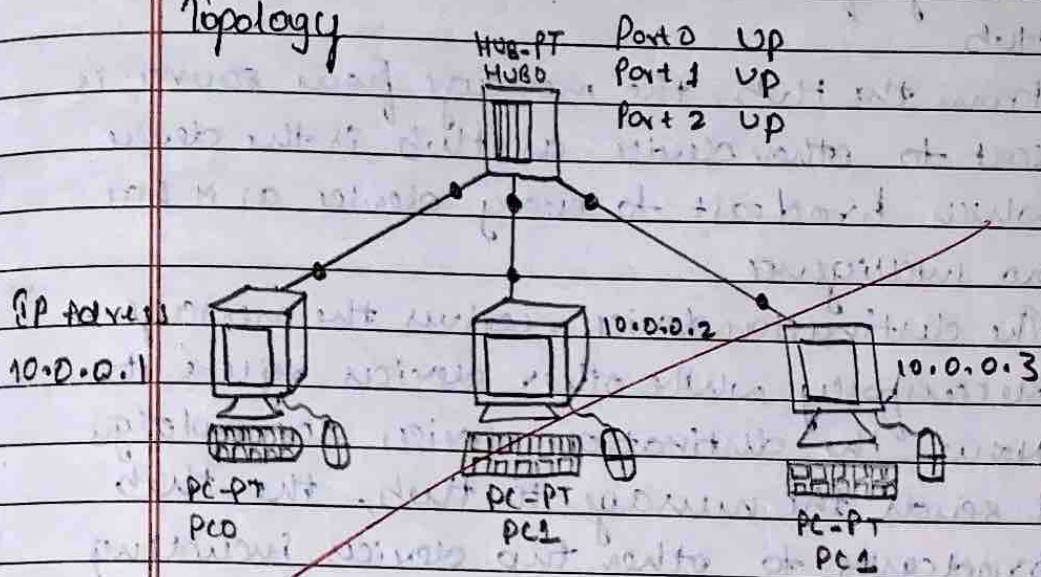


Lab-01

AIM: To demonstrate the transmission of a single PDU between two devices connected using a Hub and a switch.

- * Select the end devices: PC-PT PC0; add 3 device
- * Select Hub-PT Hub0
- * Connect the devices with the Hub using copper straight-through cable.

Topology



Steps to configure

- * Click on the PC-PT PC0 devices, select config
- Choose FastEthernet0 from Interface
- * In IP configuration, check static and enter IP Address for 3 devices as 10.0.0.1, 10.0.0.2, 10.0.0.3, observing that subnet mask is automatically configured.

Steps to Add simple PDU

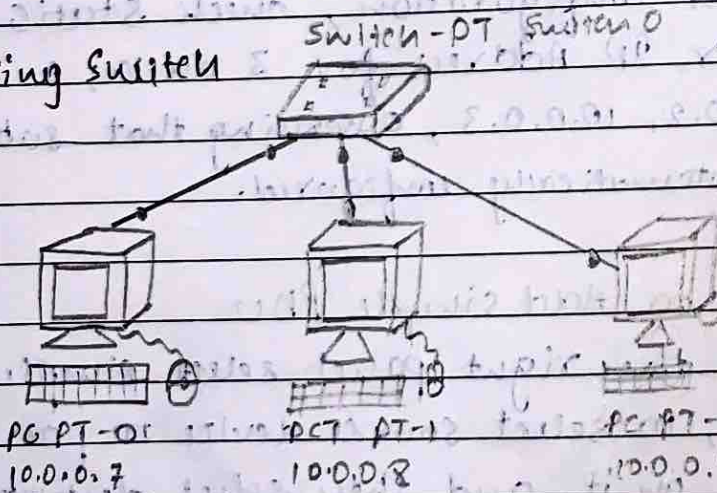
- * From the right panel select simple PDU ☒
- * First, to select source device to pass message click on it and then select destination device

- * Now, the PDU is successfully set.
- * To check the simulation of PDU, switch to simulation mode from the panel.
- * From play control in simulation mode, click on Add capture / Play

Observation

- * When the simulation mode is played, the message from source device is sent to Hub
- * From the Hub, the message from source is sent to other device as hub is the device which broadcast to every device as it has no intelligence.
- * The destination device receives the message successfully while other devices rejects it.
- * Now, the destination device acknowledges it sends the message to hub, the hub broadcasts to other two devices including source device.
- * The message is received by the source successfully and rejected by other.

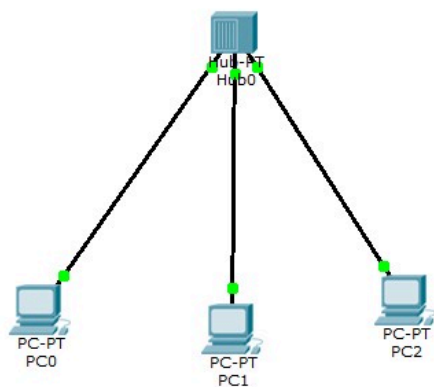
Using Switch



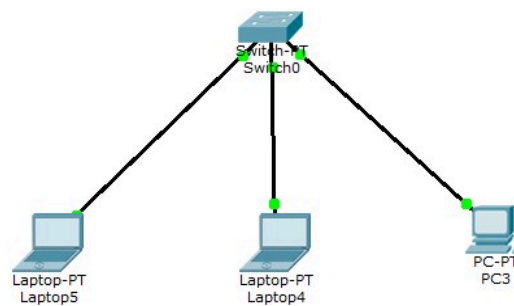
Observation

- * Connect 3 PC devices or more to the switch (Generic).
- * Configure the PC devices same procedure to follow.
- * Now, using simple PDU send message from PCPT-0 to PCPT-2, the message from source is sent to switch and switch send the message directly to the destination i.e. PC-PT (PC-2).
- * Hence, the switch doesn't broadcast message to all other device.

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Hub (Star topology)



Switch (Star topology)

The screenshot shows the configuration window for PC0, specifically the 'Config' tab. The 'FastEthernet0' interface is selected under the 'INTERFACE' section. The configuration details are as follows:

Section	Parameter	Value	Status
GLOBAL	Port Status	On	<input checked="" type="checkbox"/>
	Bandwidth	100 Mbps	<input checked="" type="checkbox"/> Auto
	Duplex	Half Duplex	<input checked="" type="checkbox"/> Auto
	MAC Address	000A.F3E4.5D93	
INTERFACE	IP Configuration	Static	<input checked="" type="radio"/>
	IP Address	10.0.0.1	
	Subnet Mask	255.255.255.0	
	IPv6 Configuration	Static	<input checked="" type="radio"/>
IPv6 Configuration	Link Local Address:	E80::20A:F3FF:FEE4:5D93	
	IPv6 Address		

Configuration

