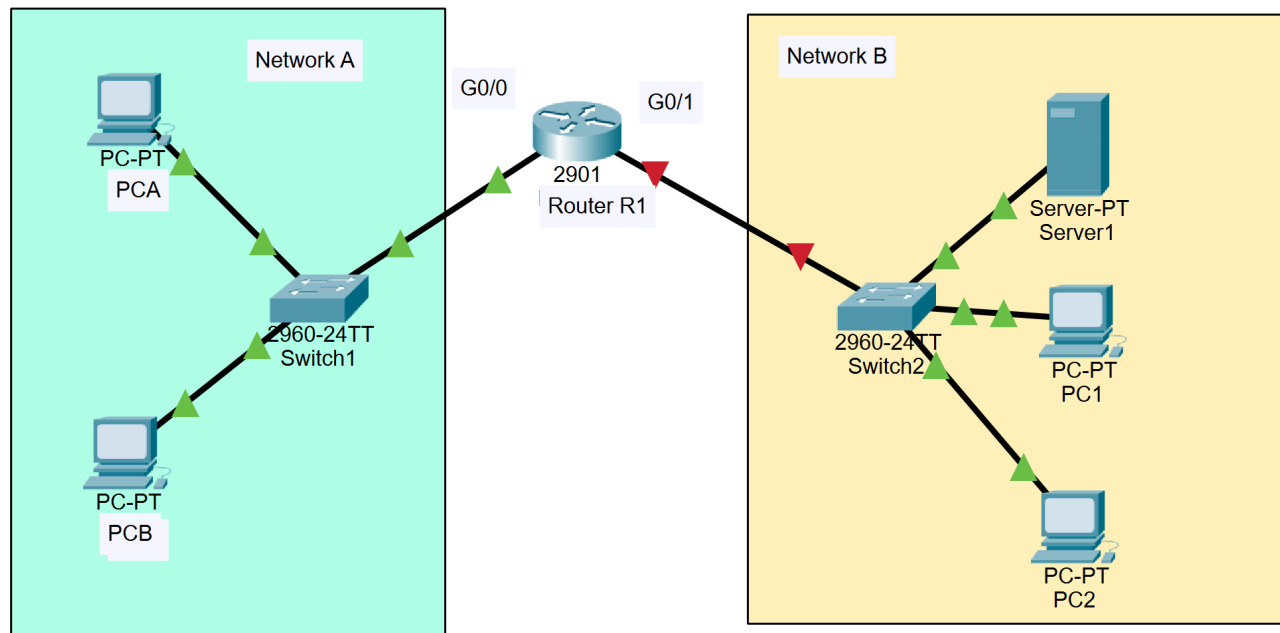


Project 1: Building a Switches and Router Network **using CISCO Packet Tracer**

Instructions:

1. This is an individual work.
2. Submit on Moodle:
 - a. A soft copy of your Cisco packet tracer file with your names. (.pkt file) [0.25 Mark]
 - b. Word document with network design details, all snapshots requested and answer. [2.25 Mark]

Topology



Step 1: Physical Topology Implementation

Using Cisco packet tracer , Make the network in the diagram above.

Required Resources

- 1 Router (Cisco 2901) – R1: with two LAN interfaces (interfaces GigabitEthernet 0/0 and GigabitEthernet 0/1)
- Switches (Cisco 2960)
- PCs as end devices
- One Web server

Required Configuration

1) Cable the network as shown in the topology.

- Layout the devices shown in the topology diagram, and cable, as necessary using cisco packet tracer. Note: you may use auto configuration option for cables.
- Power on all the devices in the topology.

2) Configure the switch.

- No configuration is required on the switch.

3) Configure the Router.

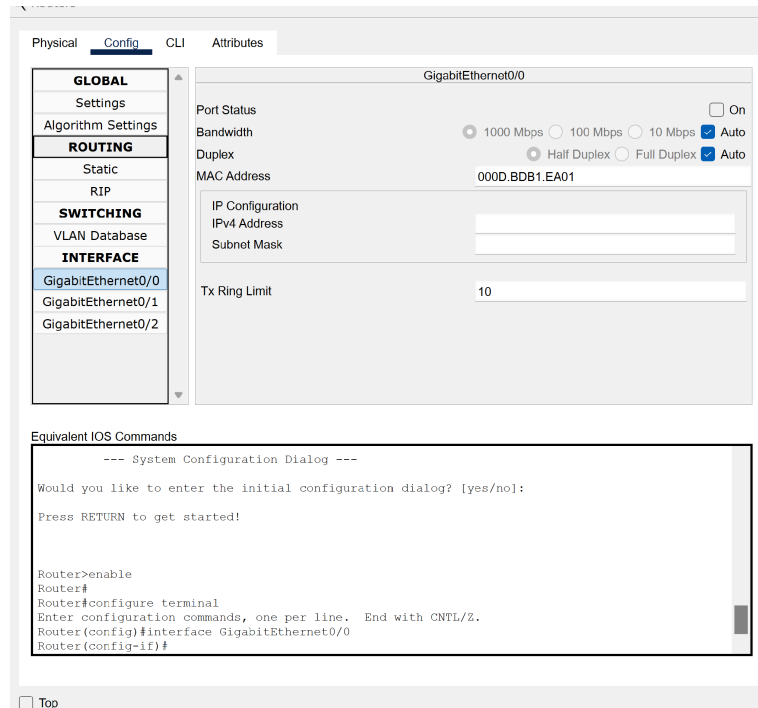
Before configuring the interfaces of the router. You need to design the network and do the subnetting.

- A. Network shown above is provided with starting block address of 199.19.30.0/24.

The subnet mask designed for the Company network is /26. Two subnet addresses are used for Network A and Network B. The remaining will be used for future use. Network A is connected to router interface G0/0 and Network B is connected to router G0/1 interface. Fill this table accordingly.

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	G0/0			N/A
	G0/1			N/A
PC A	NIC			
PC B	NIC			
PC 1	NIC			
PC 2	NIC			
Web Server	NIC			

- B. Configure the router two interfaces GigabitEthernet 0/0 and GigabitEthernet 0/1 with IP addresses and masks according to the table filled. **Show the configuration as snapshots.**



C. Activate both interfaces up.

Step 4: Configuration on PCs

- Configure the IP address, subnet mask, and default gateway settings on PC A and PC B.

Show the settings of PC A and PC Bas snapshots.

- Configure the IP address, subnet mask, and default gateway settings on PC 1, PC 2.

Show the settings of PC 1 and PC 2 as snapshots.

- Configure the server as a **Web server**. Use the attached document for the configuration.

Show the settings as snapshots.

Step 5: Verifying the network

- Ping PC A to PC 2. Put the result as snapshot.
- PC B on network A access the webserver on network B. Put the result as a snapshot.