

GROUP-B

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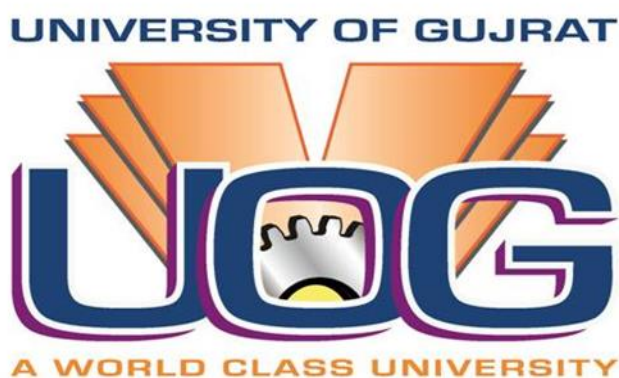
Course Name: Computer Network

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Contents

ABSTRACT	3
EXPERIMENT NAME:.....	4
OBJECTIVE:.....	4
EQUIPMENT:	4
THEORY:	4
CONFIGURATION:.....	5
CONNECTION:	7
1-Using Line Topology:	7
2-Using Star Topology:	8
CONCLUSION:.....	9
REFERENCES:	9

ABSTRACT

The main purpose of this group task is to develop an advanced level understanding of computer networking and static routing by using Cisco Packet Tracer. So to implement this we made a connection manually, there are some issue while sending a message via one router to another which is sorted in such a way by assigning them there proper a and c class IP addresses. This networking technique help to facilitate the networking envairment among users.

Lab Task

EXPERIMENT NAME:

Observing Static Routing With Four Routers.

OBJECTIVE:

The objective of the lab is to configure 4 routers to observe static routing among 4 different networks.

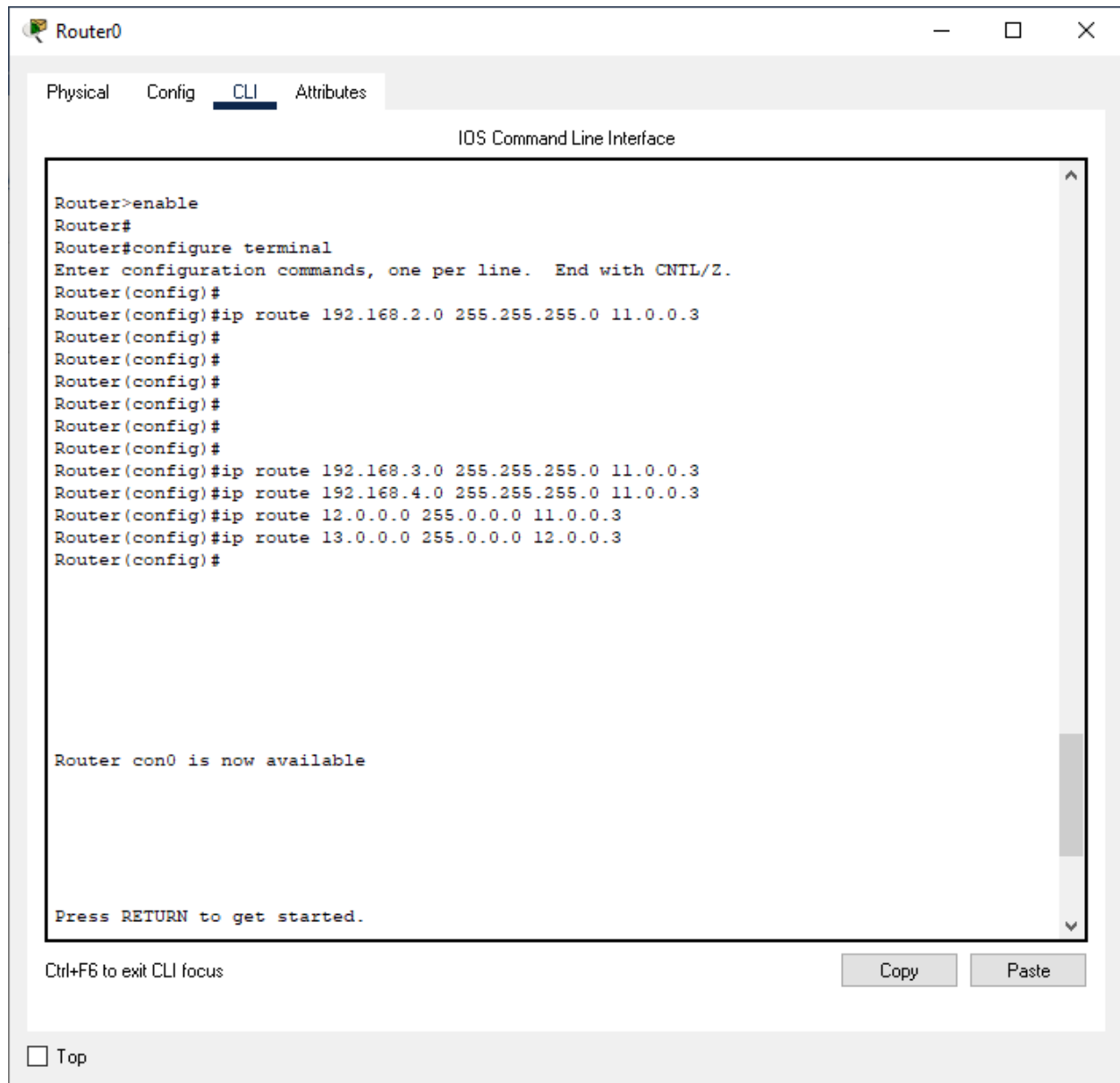
EQUIPMENT:

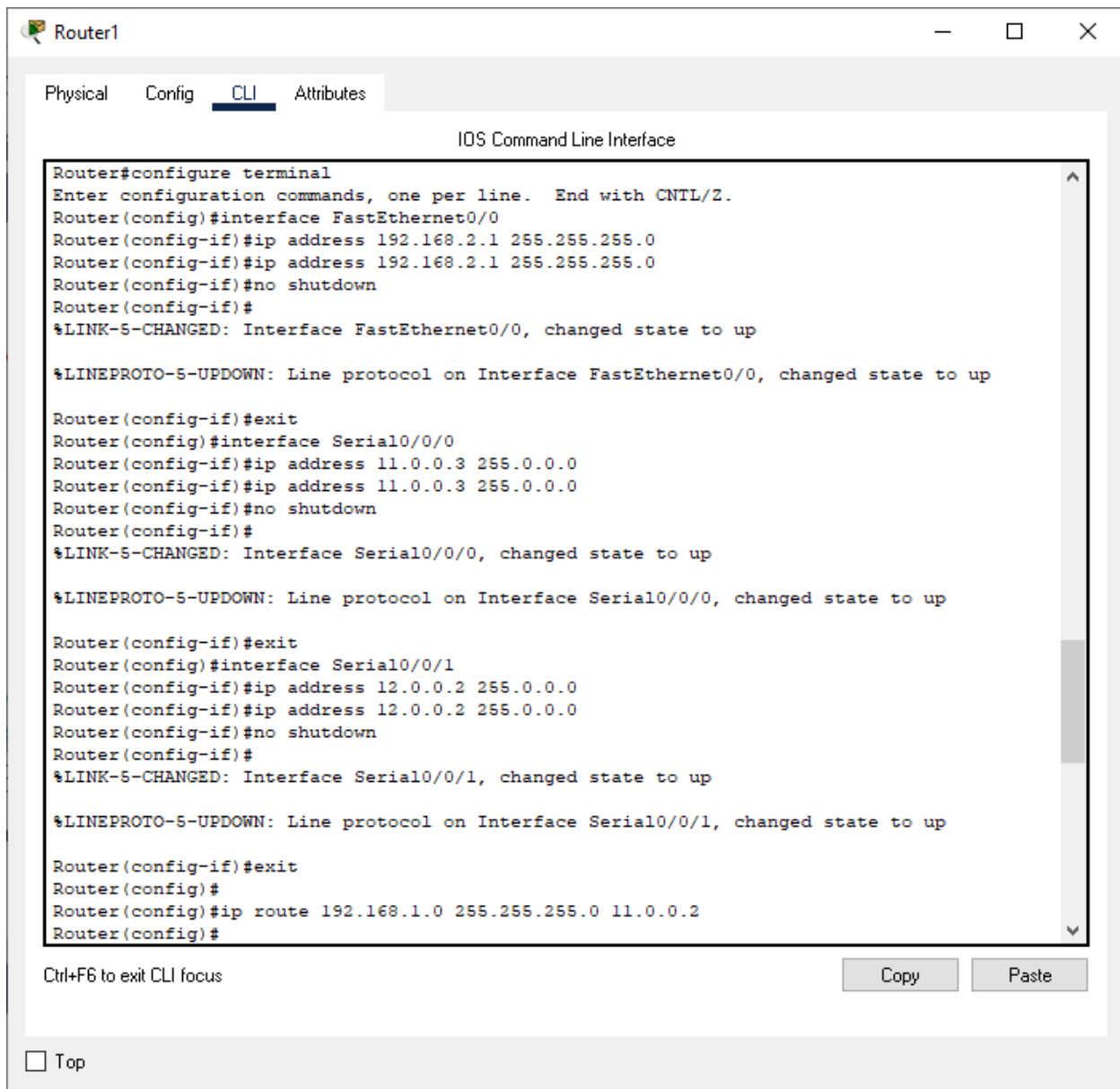
Packet Tracer is a cross-platform visual simulation tool designed by Cisco Systems that allows users to create network topologies and imitate modern computer networks. The software allows users to simulate the configuration of Cisco routers and switches using a simulated command line interface.

THEORY:

Static routing is a form of routing that occurs when a router uses a manually-configured routing entry, rather than information from dynamic routing traffic. It's easy to implement in a small network, suitable for simple topologies or for special purposes such as a default static route.

CONFIGURATION:

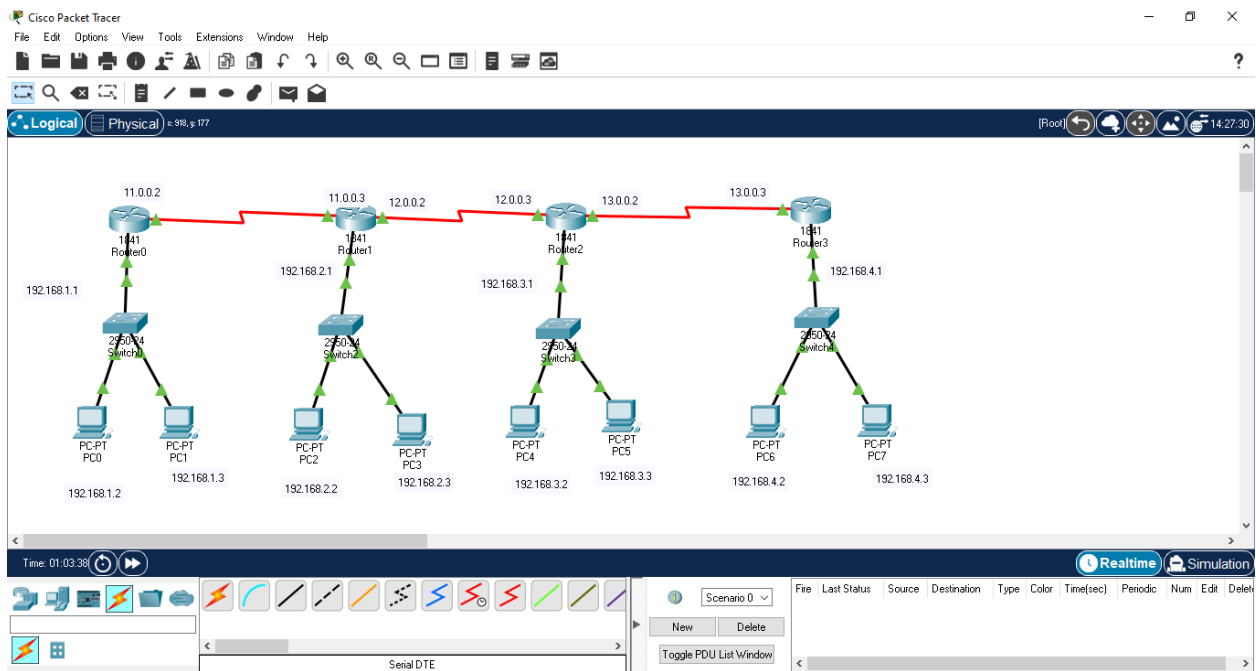




CONNECTION:

1-Using Line Topology:

In a line topology, the host communicates directly with all nodes through one bus line. It is also known as daisy-chaining or bus topology.

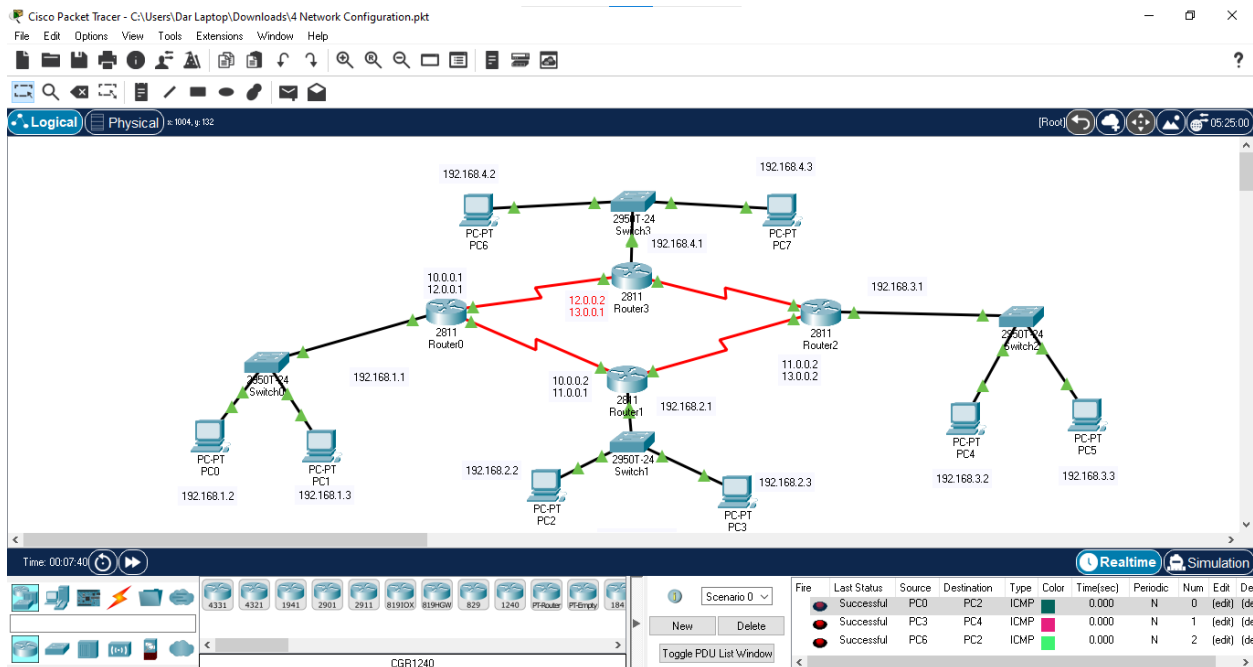


Output:

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC1	PC2	ICMP		0.000	N	0	(edit)	(delete)
	Successful	PC3	PC4	ICMP		0.000	N	1	(edit)	(delete)
	Successful	PC1	PC6	ICMP		0.000	N	2	(edit)	(delete)

2-Using Star Topology:

A star topology is a topology for a Local Area Network in which all nodes are individually connected to a central connection point, like a hub or a switch. A star takes more cable than a bus, but the benefit is that if a cable fails, only one node will be brought down.



Output:

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	De
	Successful	PC0	PC2	ICMP		0.000	N	0	(edit)	(de
	Successful	PC3	PC4	ICMP		0.000	N	1	(edit)	(de
	Successful	PC6	PC2	ICMP		0.000	N	2	(edit)	(de

CONCLUSION:

The routers were configured successfully. It was tested by sending messages several times. The message was received and an acknowledgment was sent back to the sender. The system was built using static routing where I configured the router manually. The IP route was set by giving destination network, subnet mask, and next hop.

REFERENCES:

1. *Introduction to Computer Network* ,Thomas .G
2. *Network Fundamentals*, Mark. A Dye, Rick MacDonald, Antoon W. Ruff
3. *Data Communication and Networking* by Behrouz A. Forouzan