WORKSHEET – 2.3

Name:-Rahul Maurya UID:- 20BCS7260
Class/section :- 716B Subject :- CN Lab

Aim:

Understand Routing Mechanism.

Task to be done:

Create a network to implement Distance Vector routing Protocol using Packet Tracer.

Requirements:

Packet Tracer.

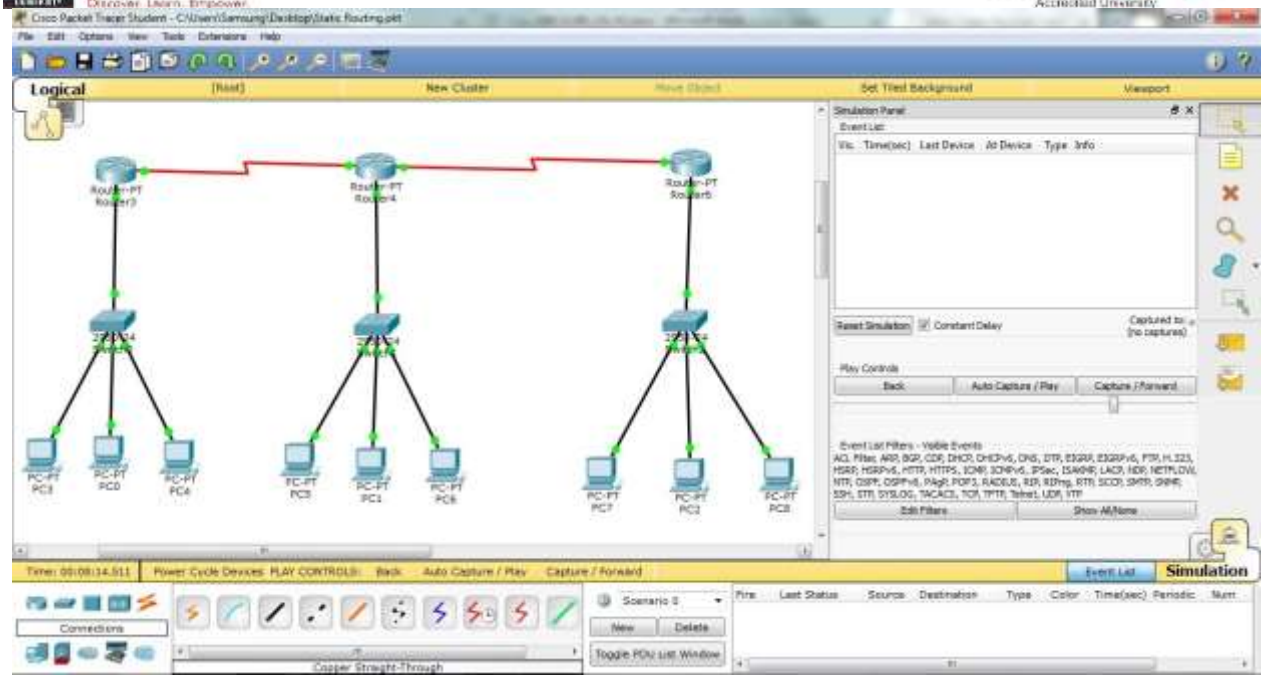
Result/Output/Writing Summary:

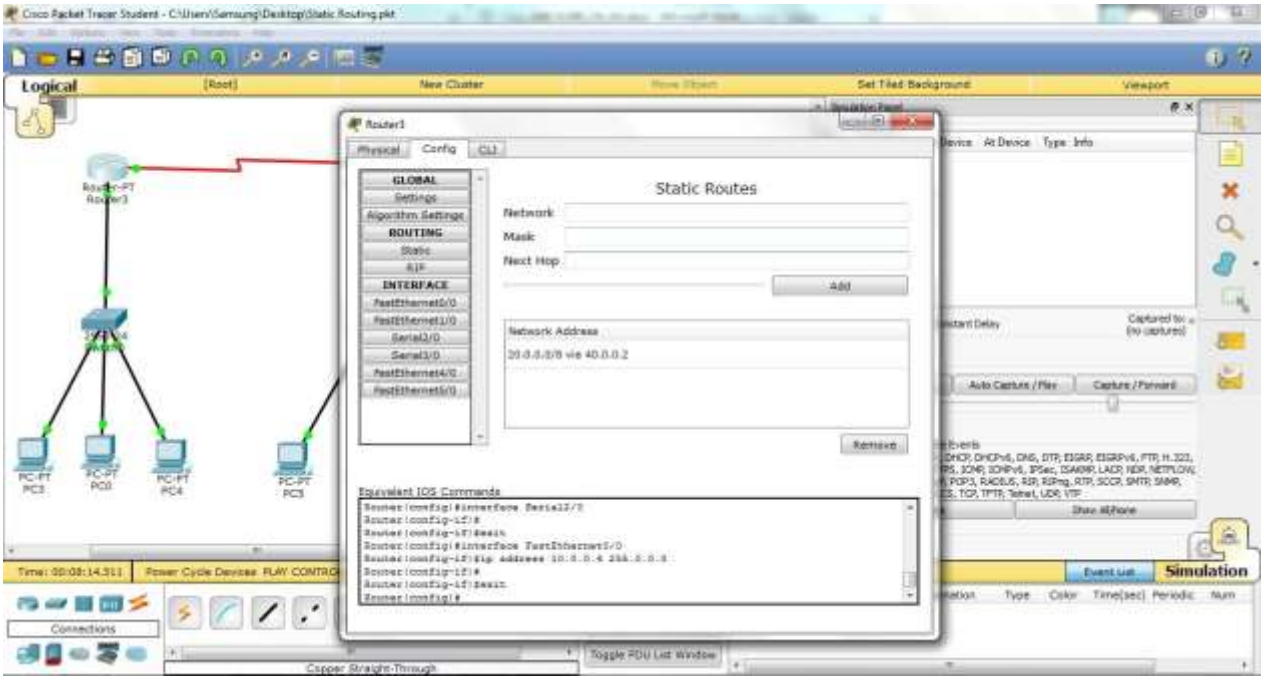
a) Static Routing:

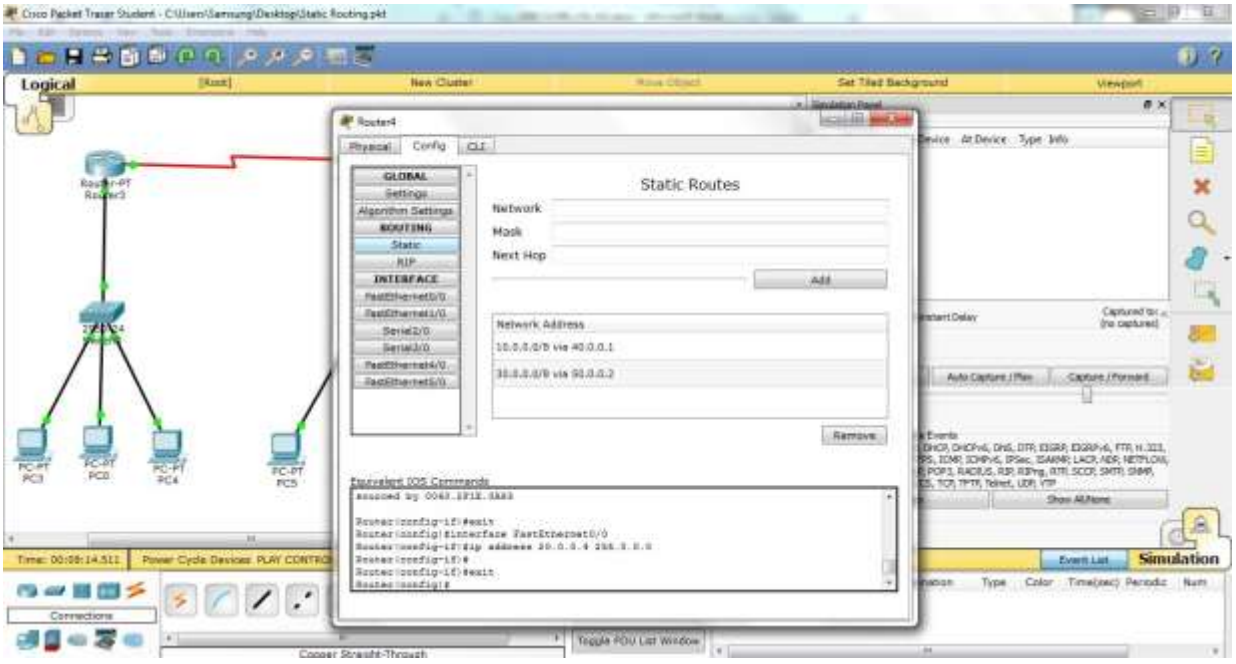
Static routing is the manual method of routing . In static routes the administrative distance is as default value. In **Static routing**, we can enter all the routes manually to the router. In other words, we can define each routing steps **one by one**. To access a network, which nodes we need to pass through, we can define such steps. This work is not an easy work, so static routing is used in small networks.

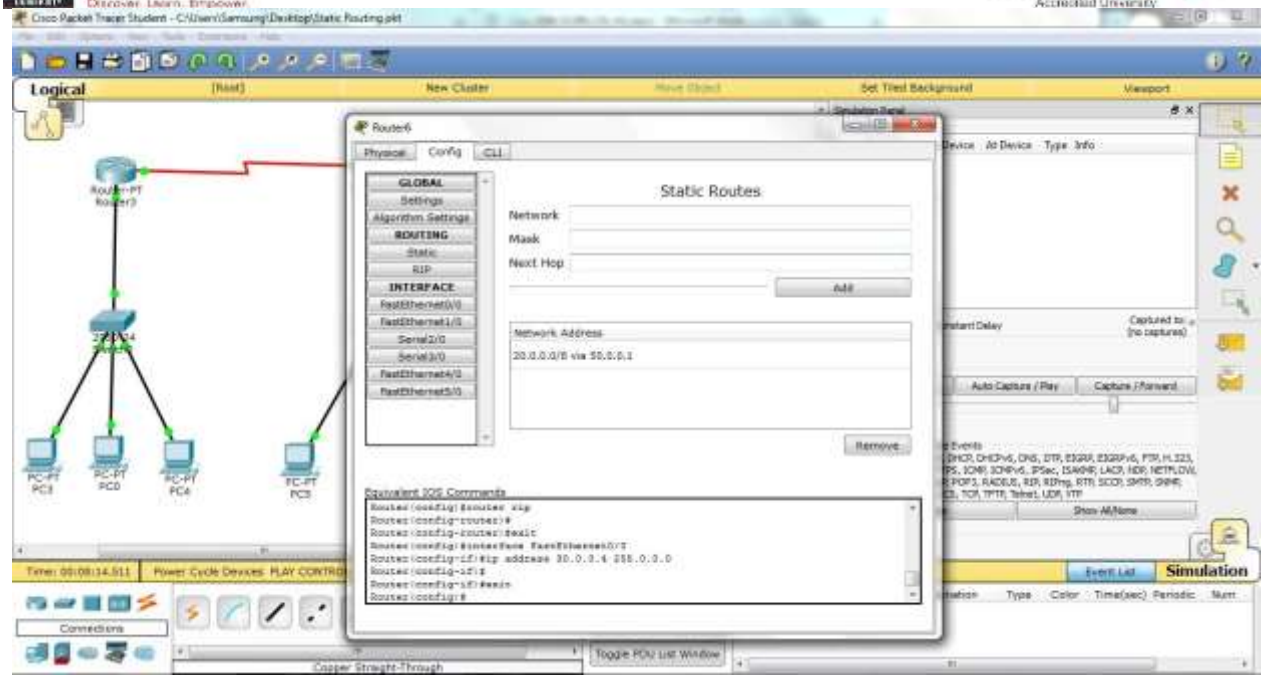
CHANDIGARH UNIVERSITY
Discover. Learn. Empower.

NAAC GRADE A+
Accredited University



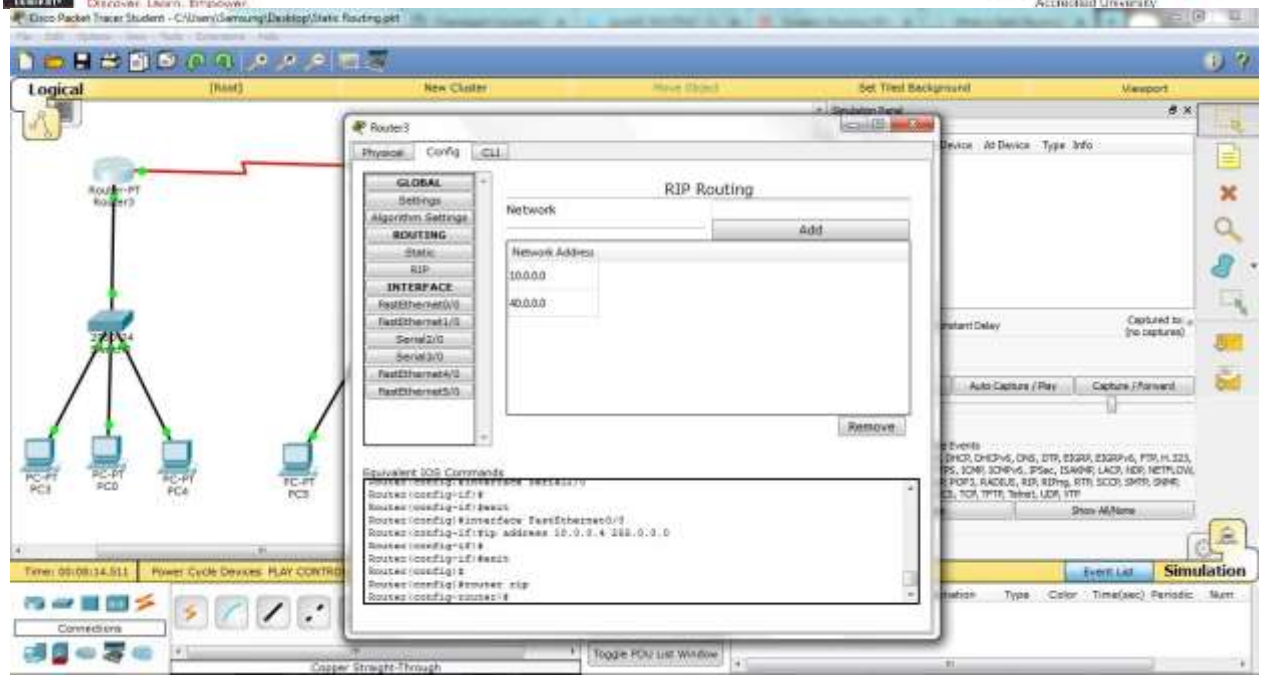

Logical
Router1
Physical
Config
CLI
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
Static Routes
Network
Mask
Next Hop
Add
Network Address
Remove
Equivalent IOS Commands
Simulation

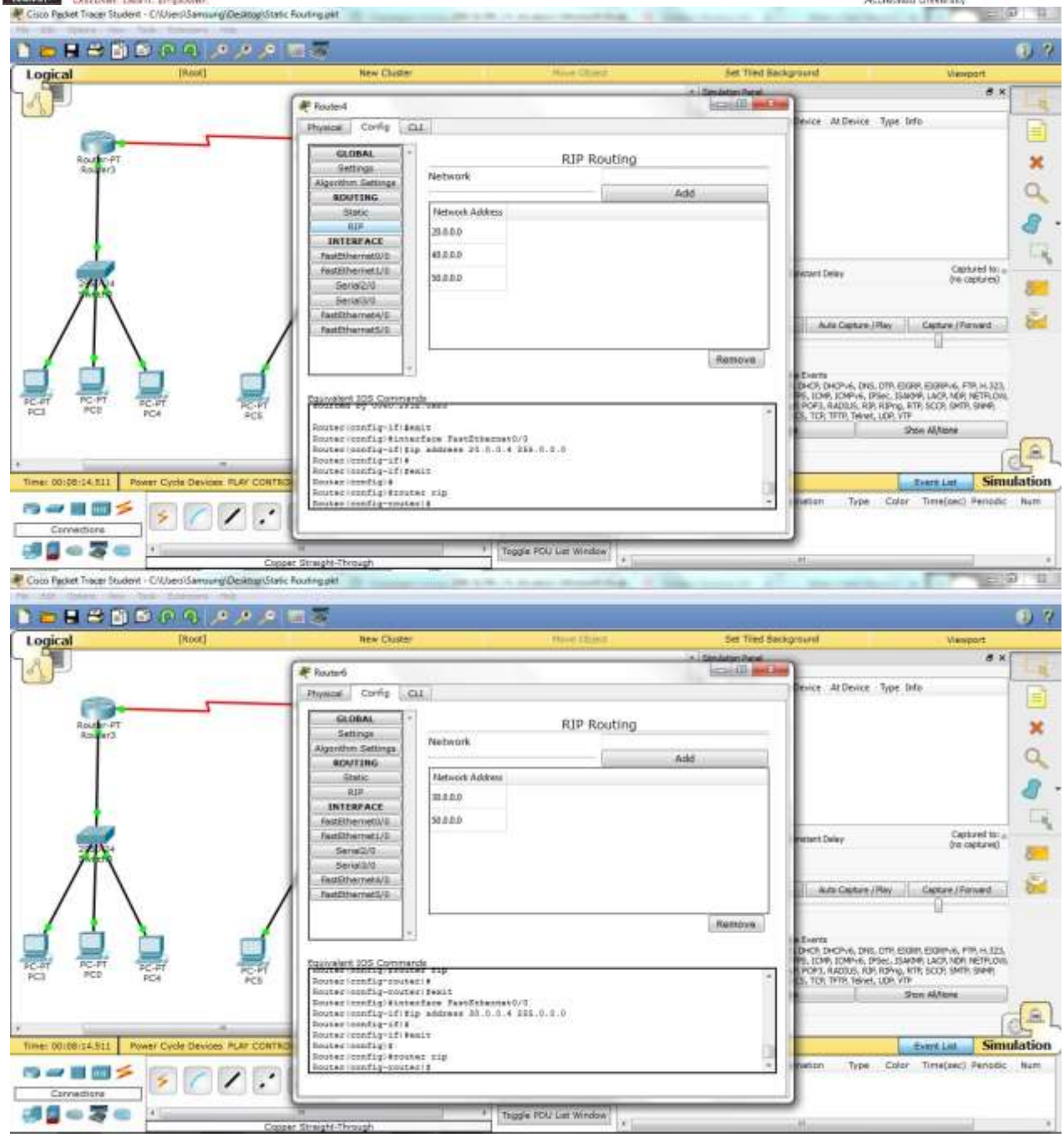

Logical
Router4
Physical
Config
CLI
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
Static Routes
Network
Mask
Next Hop
Add
Network Address
Remove
Equivalent IOS Commands
Simulation



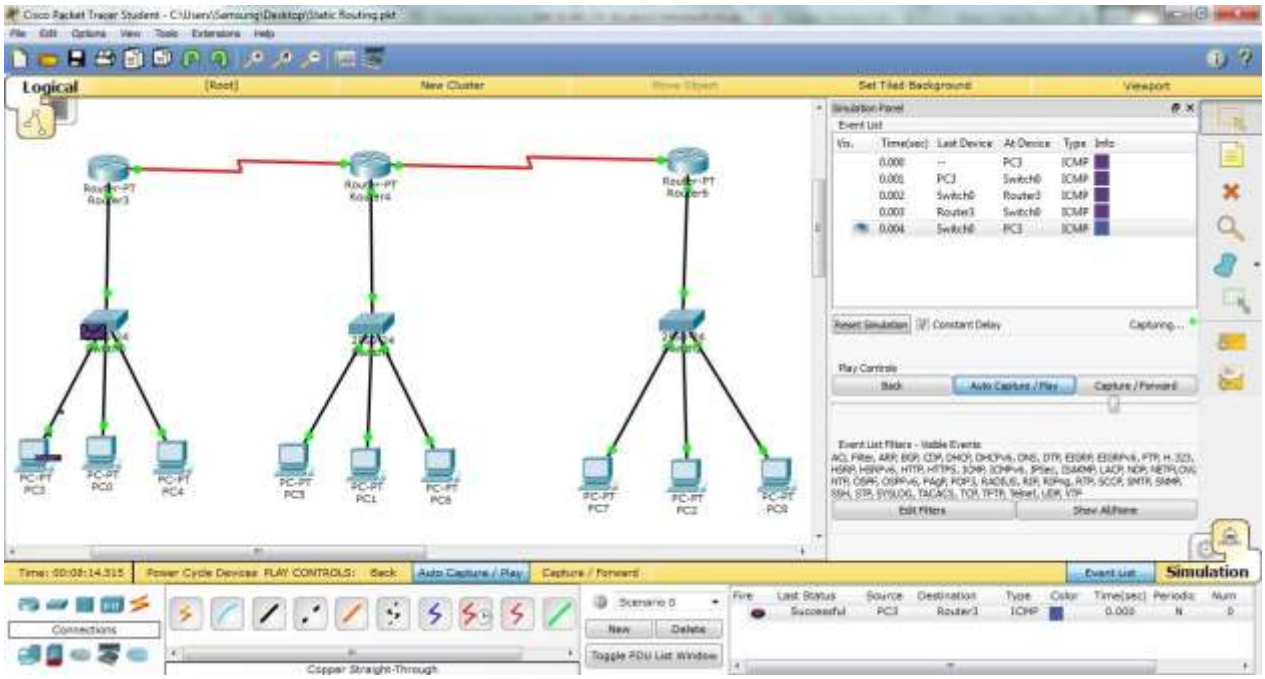
b) Dynamic Routing:

Dynamic routing is the routing that is done with the help of Routing Protocols. Dynamic Routing is a network routing procedure that facilitates the routers to pick and choose the routing paths depending on the network structure's logical changes in real-time. This is opposite to the typical traditional static network routing. This is an automated routing technique that requires very less administration and supervision. Various protocols used in this routing method are Open Shortest Path First (OSPF), Routing Information Protocol (RIP), Border Gateway Protocol (BGP), and Enhanced Interior Gateway Routing Protocol (EIGRP).

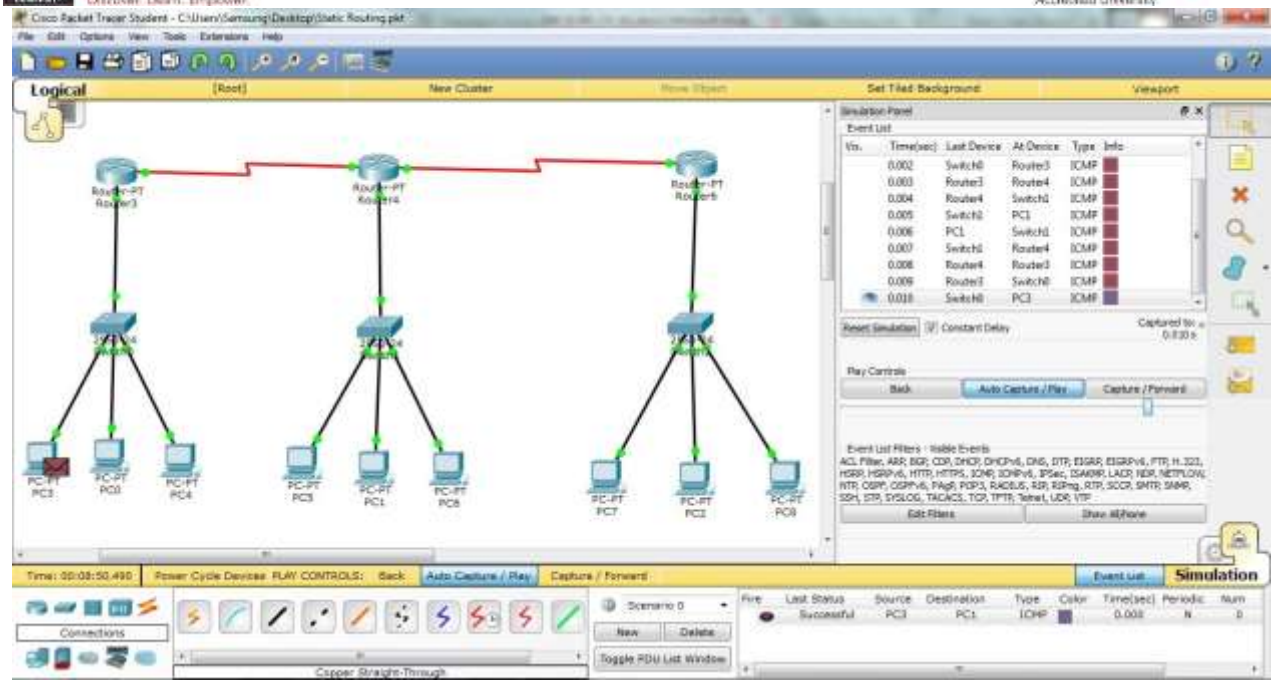

Logical
Router3
Physical
Config
CLI
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
RIP Routing
Network
Add
Network Address
10.0.0.0
40.0.0.0
Remove
Equivalent IOS Commands
Simulation


Logical
Router4
Physical
Config
CLI
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
INTERFACE
RIP Routing
Network
Add
Network Address
20.0.0.0
40.0.0.0
50.0.0.0
Remove
Equivalent IOS Commands
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 20.0.0.4 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#
Router(config)#router rip
Router(config-router)#
Router4
Router6
30.0.0.0
50.0.0.0
Router(config-router)#ip
Router(config-router)#
Router(config-router)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 30.0.0.4 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#
Router(config)#router rip
Router(config-router)#
PC-PT PC3
PC-PT PC0
PC-PT PC4
PC-PT PC5
Copper Straight-Through
Toggle PDU List Window
Simulation

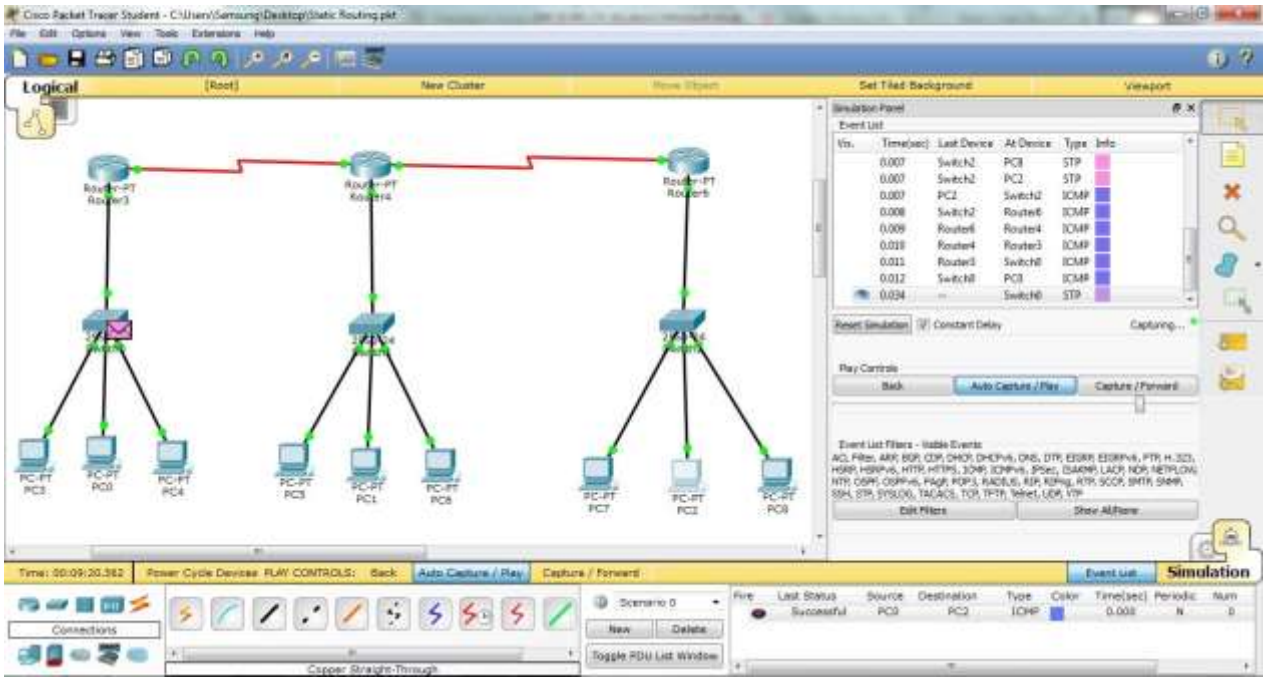
Complete Network:



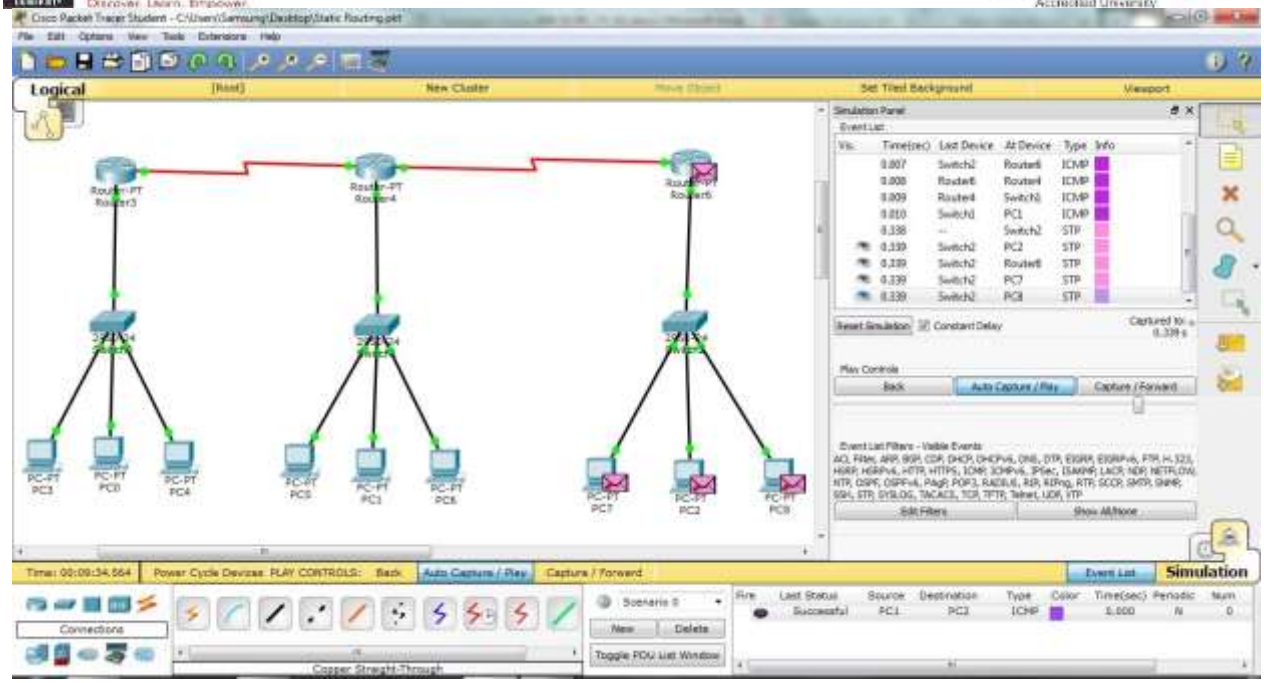
(Message Sent from Pc3 to router-3)



(Message sent from Pc-3 to Pc-1)



(Message Sent from PC-0 to Pc-2)



(Message sent from Pc-1 to Pc-2)

Learning outcomes (What I have learnt):

- Leant about Routing.
- Learnt how to configure network using static and dynamic routing.
- How to troubleshoot the network.
- Learnt to route the different networks.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			