

CSE 3035

PRINCIPLES OF CLOUD COMPUTING



Lab Assessment – 6

L15+L16 | SJT501
Dr. Sivaprakash S

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by

SHARADINDU ADHIKARI
19BCE2105

Assessment 6: Cisco Packet Tracer®.

Aim: To connect two different LANs using Router configuration.

Objective: My objective in this exercise is to learn how PDUs (messages, signals, etc.) travel from one PC to another within the LAN network, as well as between different LAN networks using Packet Tracer® simulation.

Background Theory: 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.

Procedure:

- Select a 2911 router, followed by two 2960 switches and 3 PCs.
- Select a straight-through cable.
- Using it, connect router0 and switch0 (from gigabitethernet 0/0 port of former to the gigabitethernet 0/1 port of the latter).
- Similarly, connect router0 and switch1 (gigabitethernet 0/1 to gigabitethernet 0/1).
- After all these connections are wired up, it's time to configure the router. Go to router's CLI and type in the following commands:

```
Would you like to enter the initial configuration dialog? [yes/no]: N
```

```
Press RETURN to get started!
```

```
Router>enable
Router#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface gigabitethernet 0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shut
```

```
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
```

```
Router(config-if)#exit
Router(config)#interface gigabitethernet 0/1
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no shut
```

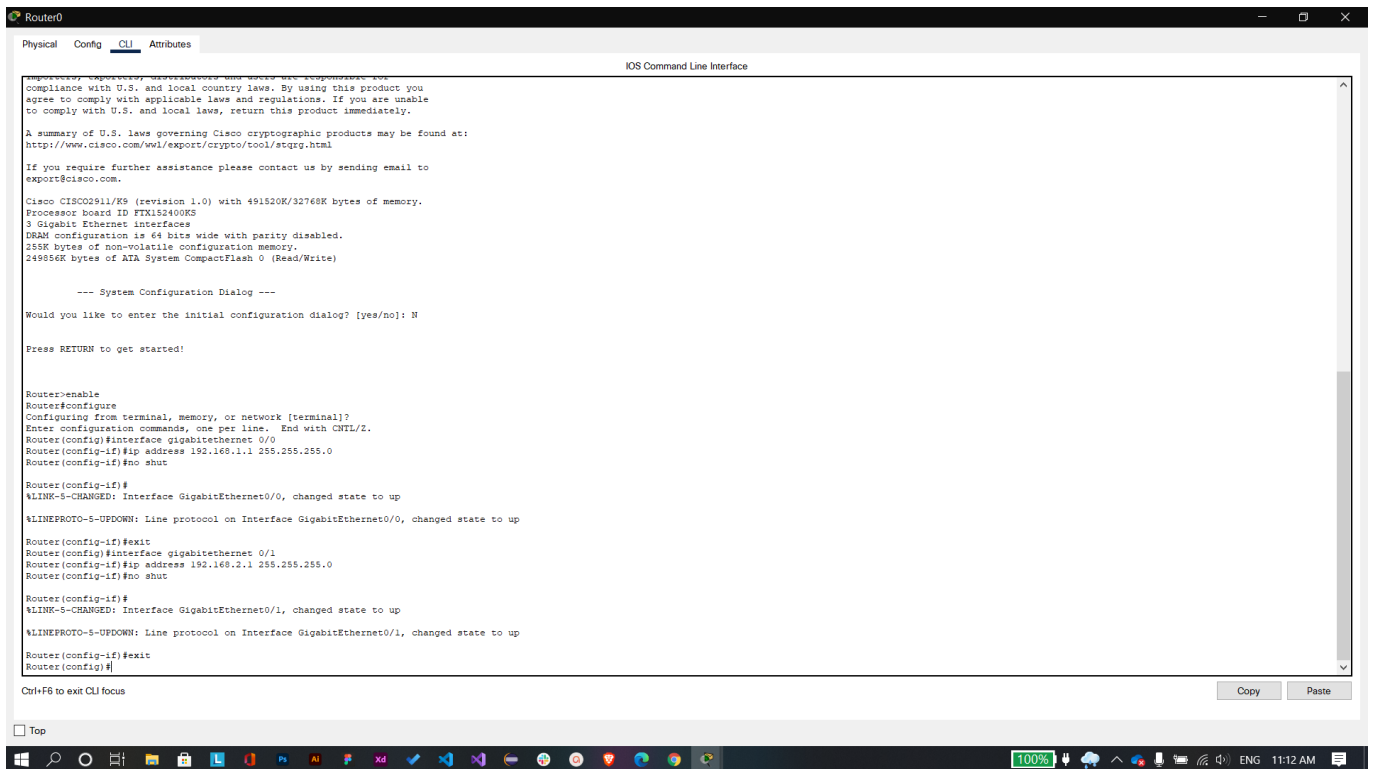
```
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
```

```
Router(config-if)#exit
Router(config)#
```

```
Router con0 is now available
```

```
Press RETURN to get started.
```



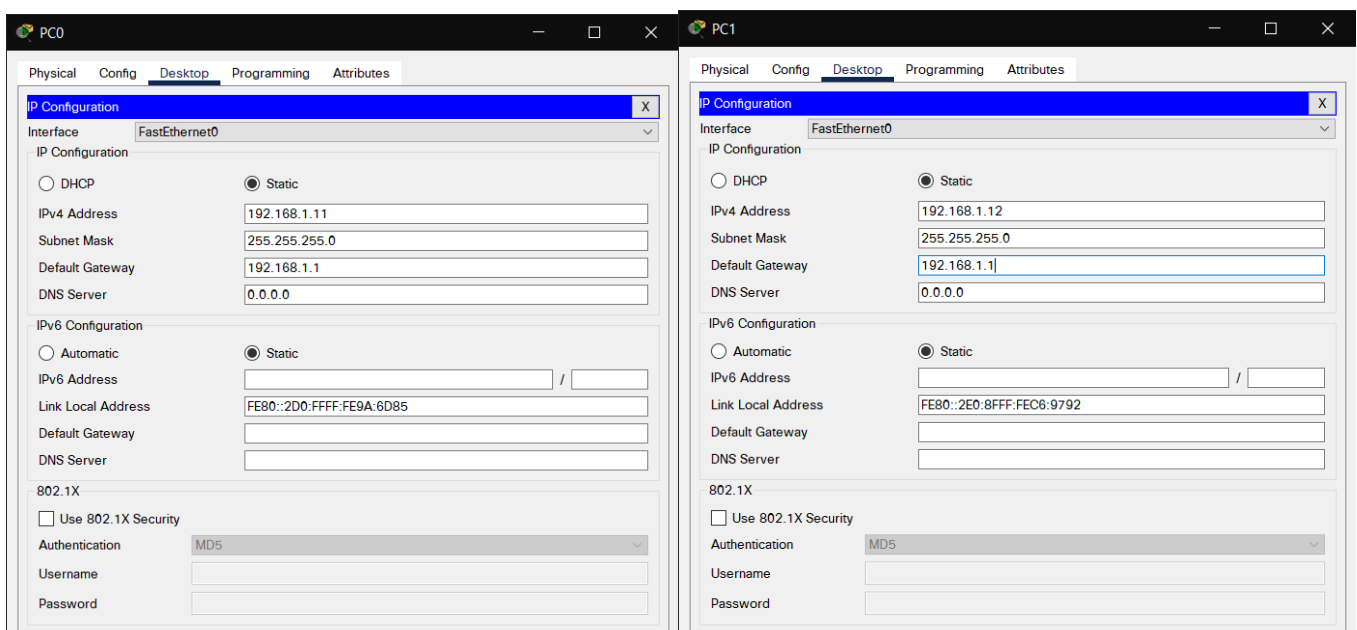
- After router0 has been configured, it's time for the PCs:

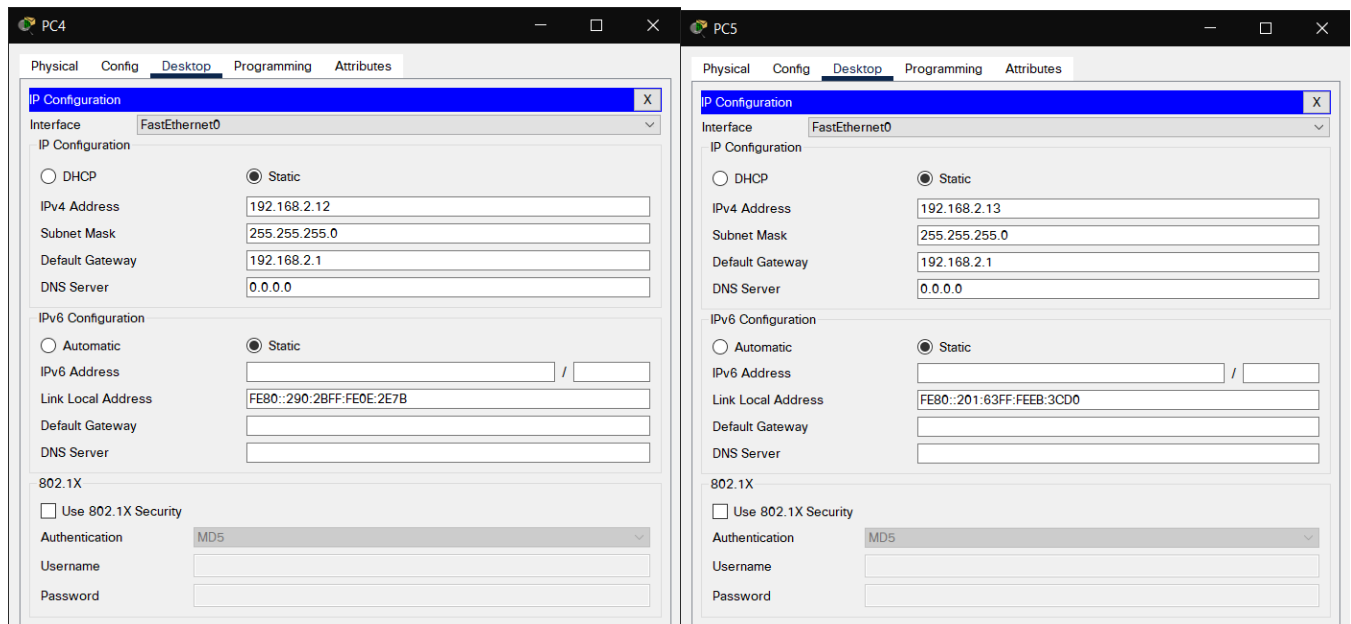
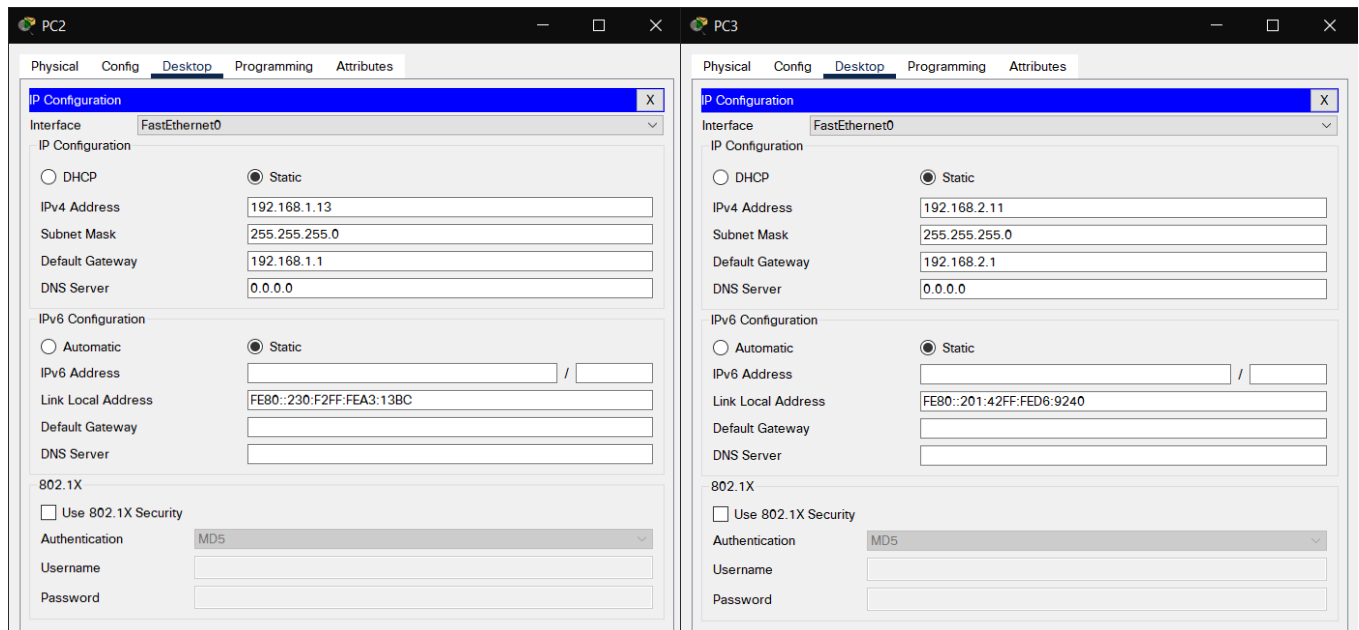
Give addresses for PCs in Network1 as: 192.168.1.11 to 192.168.1.13

Give addresses for PCs in Network1 as: 192.168.2.11 to 192.168.2.13

Set default gateway for the leftside network as 192.168.1.1 (as similar to router qigabitethernet 0/0)

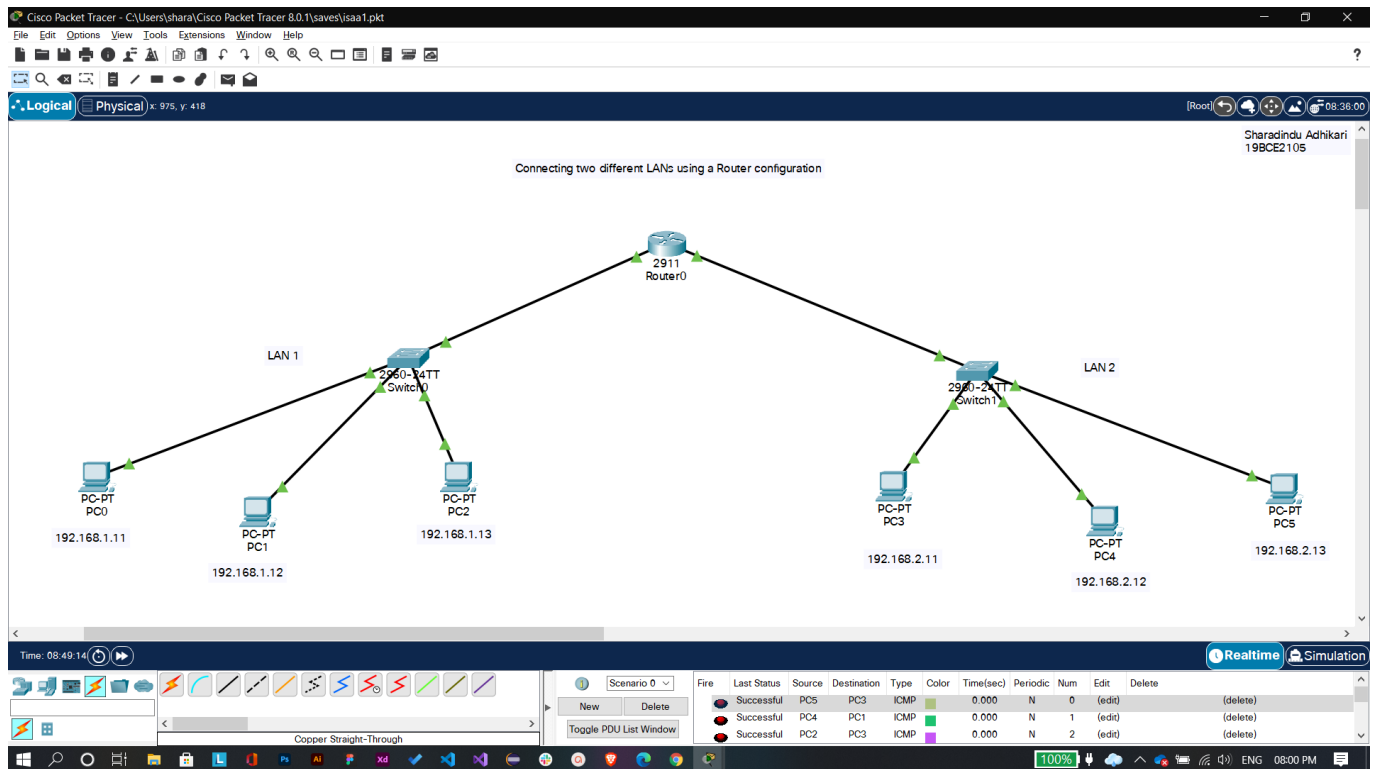
Set default gateway for the rightside network as 192.168.2.1 (as similar to router gigabitethernet 0/1)



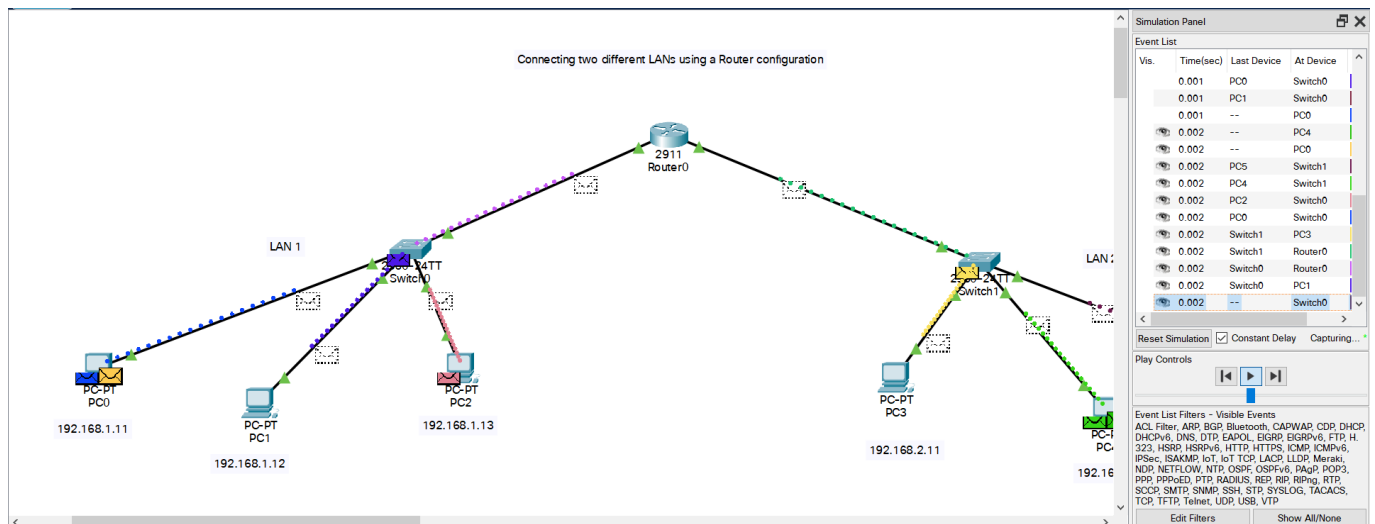


Results screenshots:

PDU List Window										
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
●	Successful	PC5	PC3	ICMP		0.000	N	0	(edit)	(delete)
●	Successful	PC4	PC1	ICMP		0.000	N	1	(edit)	(delete)
●	Successful	PC2	PC3	ICMP		0.000	N	2	(edit)	(delete)
●	Successful	PC0	PC1	ICMP		0.000	N	3	(edit)	(delete)
●	Successful	PC0	PC2	ICMP		0.000	N	4	(edit)	(delete)
●	Successful	PC4	PC3	ICMP		0.000	N	5	(edit)	(delete)
●	Successful	PC5	PC3	ICMP		0.000	N	6	(edit)	(delete)
●	Successful	PC2	PC3	ICMP		0.000	N	7	(edit)	(delete)
●	Successful	PC4	PC1	ICMP		0.000	N	8	(edit)	(delete)
●	Successful	PC0	PC5	ICMP		0.000	N	9	(edit)	(delete)
●	Successful	PC1	PC3	ICMP		0.000	N	10	(edit)	(delete)
●	Successful	PC4	PC2	ICMP		0.000	N	11	(edit)	(delete)



Observation:



Conclusion: Two different LANs are connected successfully, and packets are passed between them.