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Register No: 20BDS0146

Lab Course Name: NETWORK&COMMUNICATION

Lab Slot: L20+L21

Assesment Title : PACKET TRACER

PACKET TRACER

Cisco Packet tracer helps us get a real world experience with powerful network simulation tool built by Cisco. It also helps us practice building simple and complex networks across a variety of devices and extend beyond routers and switches. We can also create interconnected solutions for smart cities, homes, and enterprises.

Cisco packet tracer is useful to

- Create virtual networks
- Experiment while building, managing & securing infrastructures
- Visualize internal processes in real-time
- Apply skills with labs & interactive activities

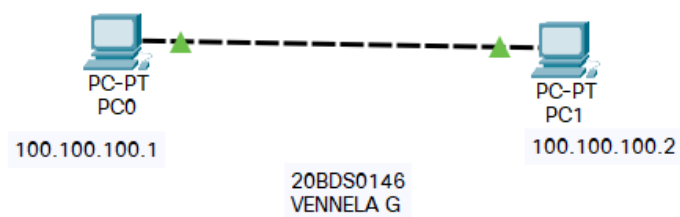
HOW TO INSTALL CISCO PACKET TRACER?

1. Open any search engine and type netacad.com in search box and press Enter.
2. A new window appears, Click on Packet tracer.
3. A window opens, click on “Learn More” option under ‘Intro to Packet tracer’.
4. Then a window opens, click on “Sign up today!”.
5. Provide your details and click on “Next account details “option.
6. Provide your personal information and click on create account.
7. Download Cisco packet tracer for android or mac based on your system.
8. After downloading, open cisco packet tracer and a new dialogue box appears.
9. Click Next after customizing options based on your requirement and click “Install” option.

EXERCISE 1

Aim: To create a peer to peer network using Cisco Packet tracer

Network:



Checking connection between devices:

```
Command Prompt X

Packet Tracer PC Command Line 1.0
C:\>ping 100.100.100.2

Pinging 100.100.100.2 with 32 bytes of data:

Reply from 100.100.100.2: bytes=32 time<1ms TTL=128
Reply from 100.100.100.2: bytes=32 time<1ms TTL=128
Reply from 100.100.100.2: bytes=32 time<1ms TTL=128
Reply from 100.100.100.2: bytes=32 time<1ms TTL=128

Ping statistics for 100.100.100.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```

Command Prompt

```

Packet Tracer PC Command Line 1.0
C:\>ping 100.100.100.1

Pinging 100.100.100.1 with 32 bytes of data:

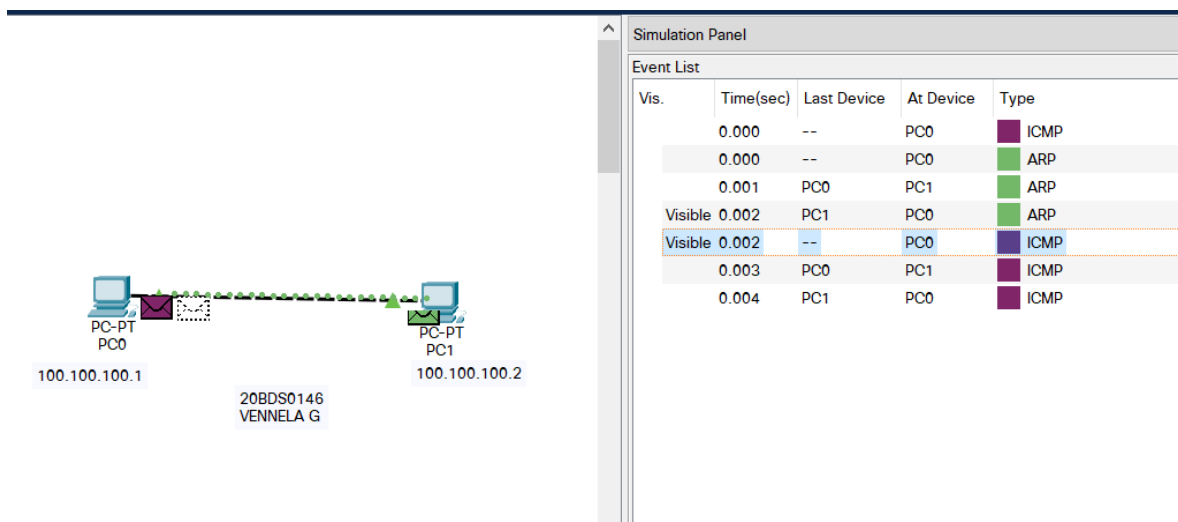
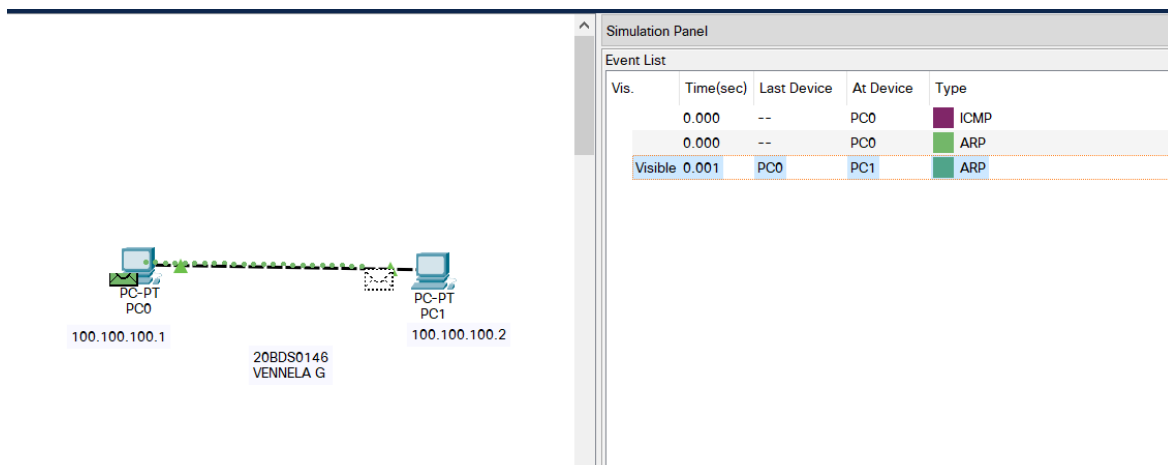
Reply from 100.100.100.1: bytes=32 time<1ms TTL=128
Reply from 100.100.100.1: bytes=32 time<1ms TTL=128
Reply from 100.100.100.1: bytes=32 time<1ms TTL=128
Reply from 100.100.100.1: bytes=32 time<1ms TTL=128

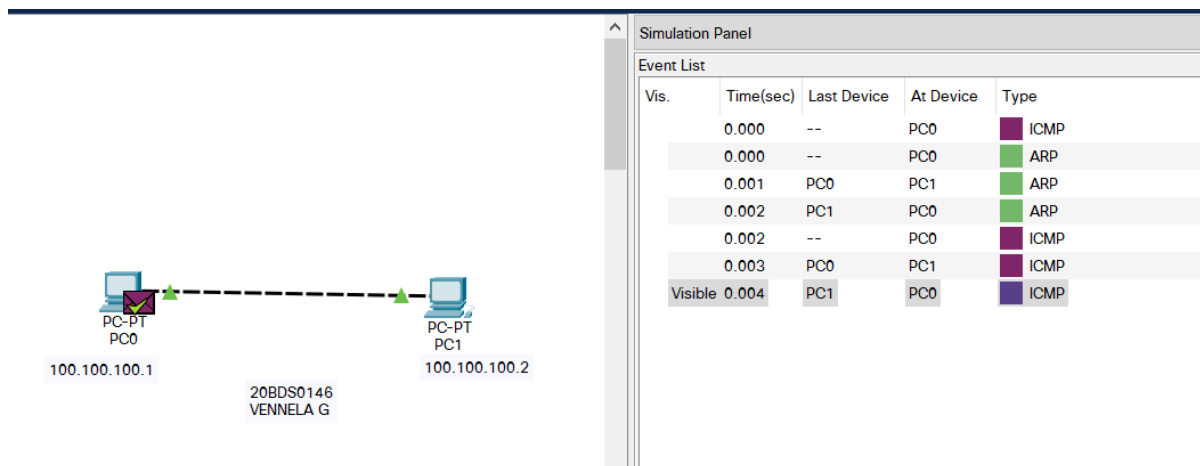
Ping statistics for 100.100.100.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>

```

Simulation Model:

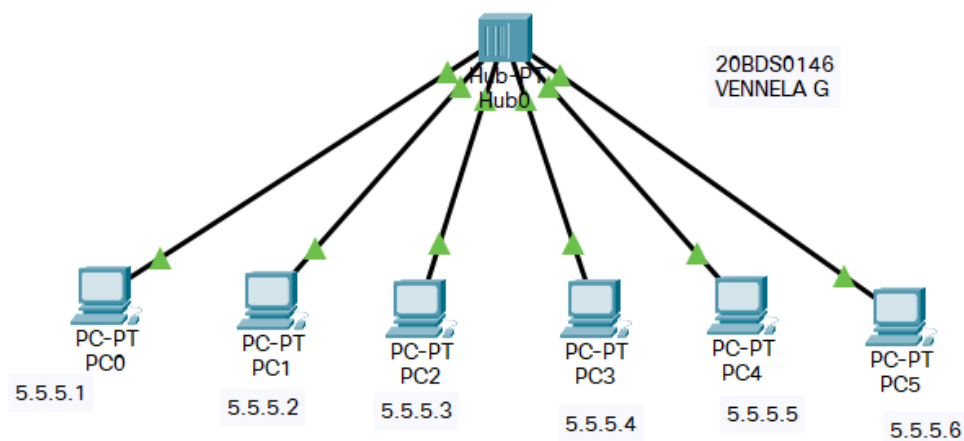




EXERCISE 2

Aim: To create a LAN network using Hub

Network:



Checking connection between any two devices in LAN :

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 5.5.5.6

Pinging 5.5.5.6 with 32 bytes of data:

Reply from 5.5.5.6: bytes=32 time<1ms TTL=128
Reply from 5.5.5.6: bytes=32 time<1ms TTL=128
Reply from 5.5.5.6: bytes=32 time<1ms TTL=128
Reply from 5.5.5.6: bytes=32 time<1ms TTL=128

Ping statistics for 5.5.5.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 5.5.5.3

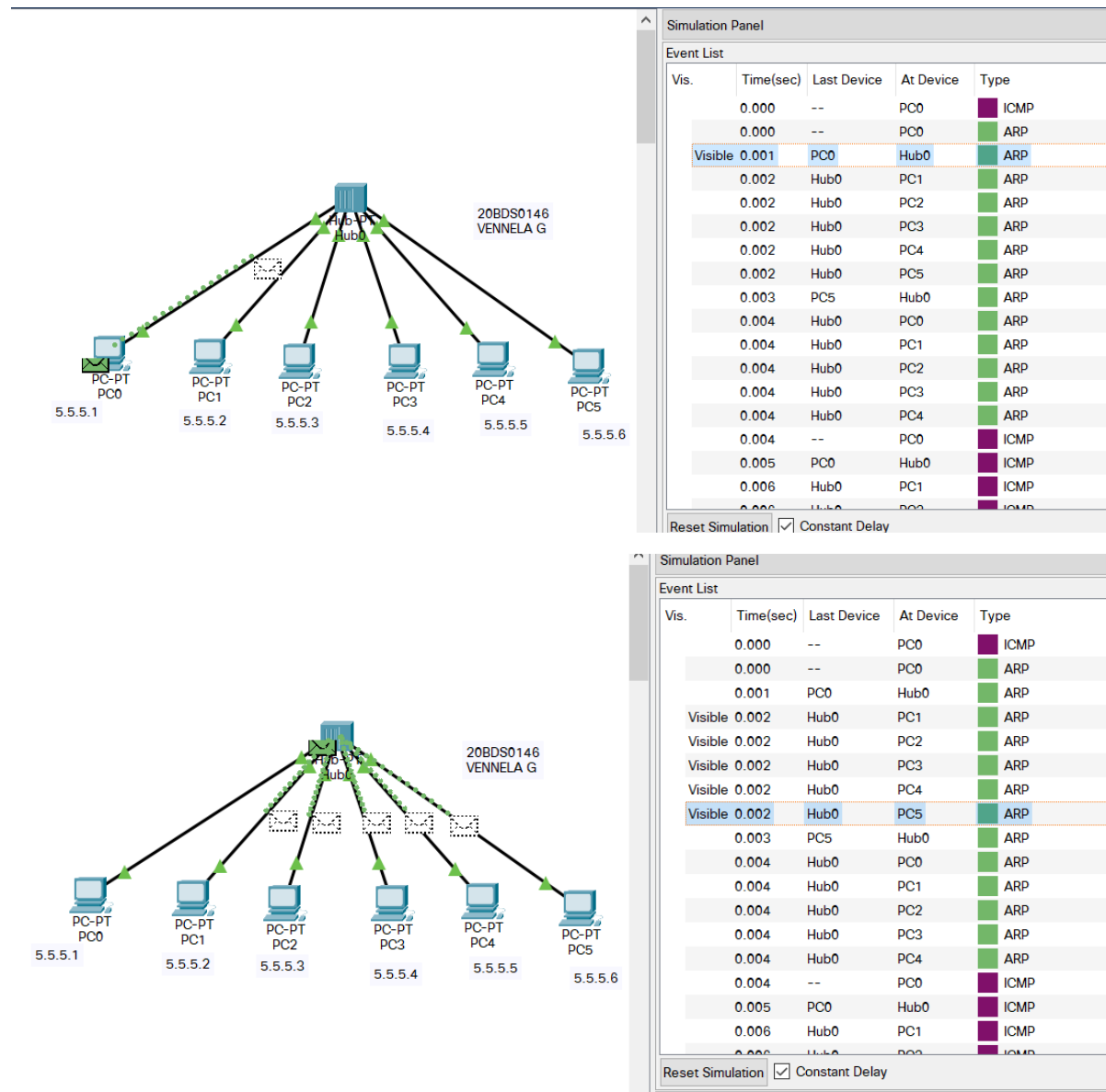
Pinging 5.5.5.3 with 32 bytes of data:

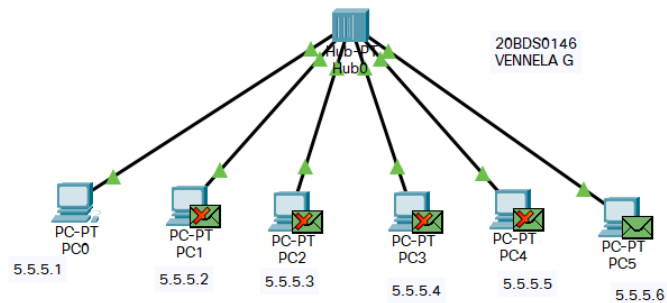
Reply from 5.5.5.3: bytes=32 time<1ms TTL=128
Reply from 5.5.5.3: bytes=32 time<1ms TTL=128
Reply from 5.5.5.3: bytes=32 time<1ms TTL=128
Reply from 5.5.5.3: bytes=32 time<1ms TTL=128

Ping statistics for 5.5.5.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

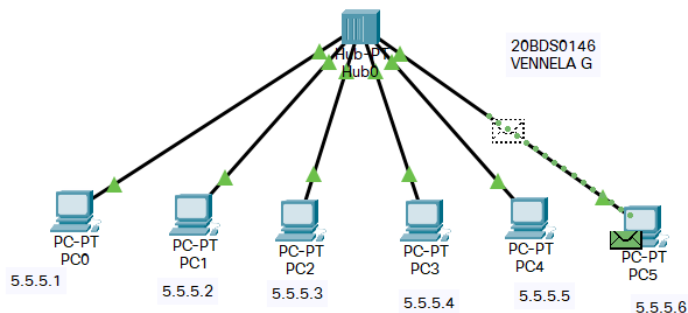
Simulation Model: (Data transfer between PC0 and PC5)





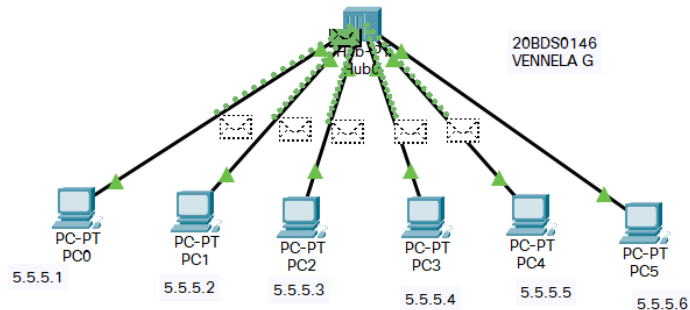
Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Hub0	ARP
Visible	0.002	Hub0	PC1	ARP
Visible	0.002	Hub0	PC2	ARP
Visible	0.002	Hub0	PC3	ARP
Visible	0.002	Hub0	PC4	ARP
Visible	0.002	Hub0	PC5	ARP
	0.003	PC5	Hub0	ARP
	0.004	Hub0	PC0	ARP
	0.004	Hub0	PC1	ARP
	0.004	Hub0	PC2	ARP
	0.004	Hub0	PC3	ARP
	0.004	Hub0	PC4	ARP
	0.004	--	PC0	ICMP
	0.005	PC0	Hub0	ICMP
	0.006	Hub0	PC1	ICMP
	0.006	Hub0	PC2	ICMP

Reset Simulation ☒ Constant Delay



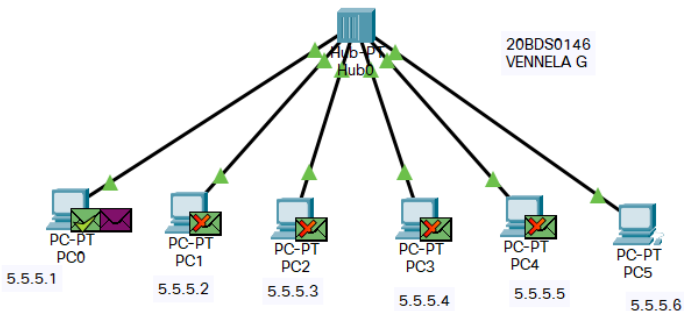
Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Hub0	ARP
	0.002	Hub0	PC1	ARP
	0.002	Hub0	PC2	ARP
	0.002	Hub0	PC3	ARP
	0.002	Hub0	PC4	ARP
	0.002	Hub0	PC5	ARP
Visible	0.003	PC5	Hub0	ARP
	0.004	Hub0	PC0	ARP
	0.004	Hub0	PC1	ARP
	0.004	Hub0	PC2	ARP
	0.004	Hub0	PC3	ARP
	0.004	Hub0	PC4	ARP
	0.004	--	PC0	ICMP
	0.005	PC0	Hub0	ICMP
	0.006	Hub0	PC1	ICMP
	0.006	Hub0	PC2	ICMP

Reset Simulation ☒ Constant Delay



Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Hub0	ARP
	0.002	Hub0	PC1	ARP
	0.002	Hub0	PC2	ARP
	0.002	Hub0	PC3	ARP
	0.002	Hub0	PC4	ARP
	0.002	Hub0	PC5	ARP
	0.003	PC5	Hub0	ARP
Visible	0.004	Hub0	PC0	ARP
Visible	0.004	Hub0	PC1	ARP
Visible	0.004	Hub0	PC2	ARP
Visible	0.004	Hub0	PC3	ARP
Visible	0.004	Hub0	PC4	ARP
Visible	0.004	--	PC0	ICMP
	0.005	PC0	Hub0	ICMP
	0.006	Hub0	PC1	ICMP
	0.006	Hub0	PC2	ICMP

Reset Simulation ☒ Constant Delay



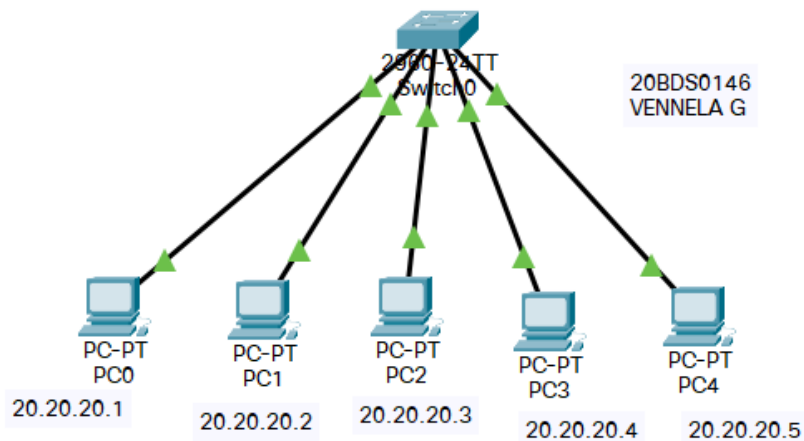
Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Hub0	ARP
	0.002	Hub0	PC1	ARP
	0.002	Hub0	PC2	ARP
	0.002	Hub0	PC3	ARP
	0.002	Hub0	PC4	ARP
	0.002	Hub0	PC5	ARP
	0.003	PC5	Hub0	ARP
Visible	0.004	Hub0	PC0	ARP
Visible	0.004	Hub0	PC1	ARP
Visible	0.004	Hub0	PC2	ARP
Visible	0.004	Hub0	PC3	ARP
Visible	0.004	Hub0	PC4	ARP
Visible	0.004	--	PC0	ICMP
	0.005	PC0	Hub0	ICMP
	0.006	Hub0	PC1	ICMP
	0.006	Hub0	PC2	ICMP

Reset Simulation ☒ Constant Delay

EXERCISE 3

Aim: To create a LAN network using Switch

Network:



Checking connection between any two devices in LAN :

```
PC1
Physical Config Desktop Programming Attributes
Command Prompt

Packet Tracer PC Command Line 1.0
C:\>ping 20.20.20.5

Pinging 20.20.20.5 with 32 bytes of data:

Reply from 20.20.20.5: bytes=32 time=4ms TTL=128
Reply from 20.20.20.5: bytes=32 time<1ms TTL=128
Reply from 20.20.20.5: bytes=32 time<1ms TTL=128
Reply from 20.20.20.5: bytes=32 time<1ms TTL=128

Ping statistics for 20.20.20.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 4ms, Average = 1ms

C:\>|
```

PC4

Physical Config Desktop Programming Attributes

Command Prompt

```

Packet Tracer PC Command Line 1.0
C:\>ping 20.20.20.2

Pinging 20.20.20.2 with 32 bytes of data:

Reply from 20.20.20.2: bytes=32 time<1ms TTL=128
Reply from 20.20.20.2: bytes=32 time<1ms TTL=128
Reply from 20.20.20.2: bytes=32 time<1ms TTL=128
Reply from 20.20.20.2: bytes=32 time<1ms TTL=128

Ping statistics for 20.20.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>

```

Mac address table:

Switch0

Physical Config CLI Attributes

IOS Command Line Interface

```

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed
state to up
%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed
state to up
%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed
state to up
%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed
state to up

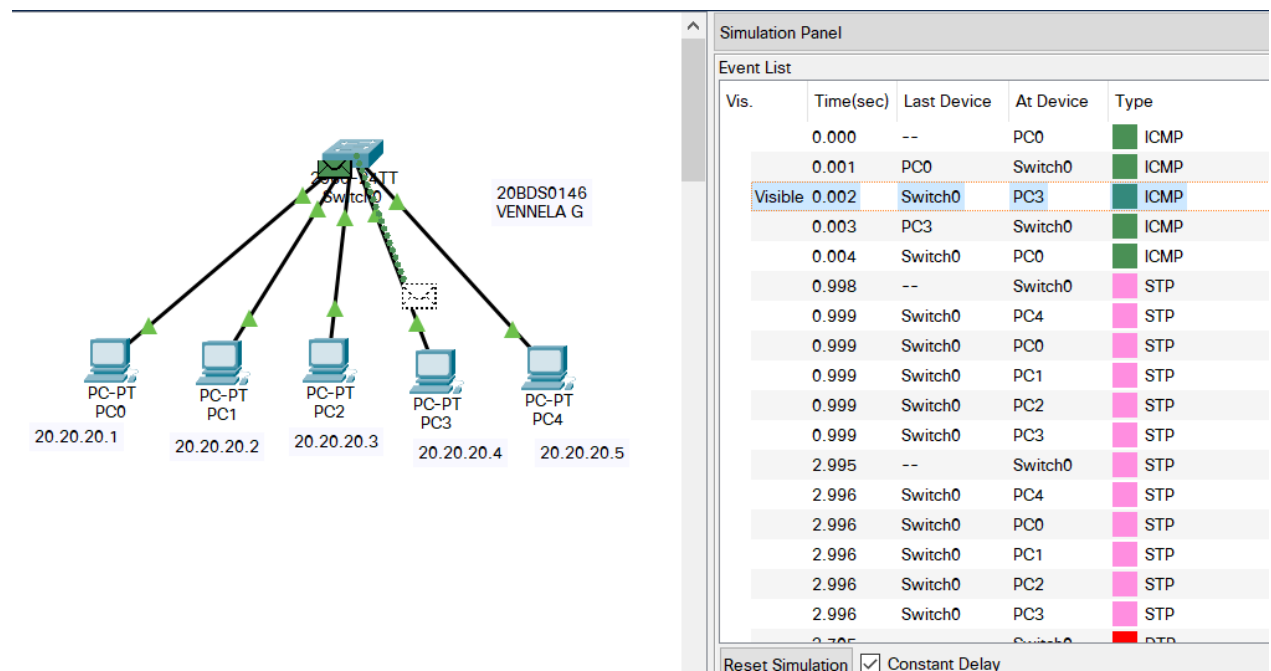
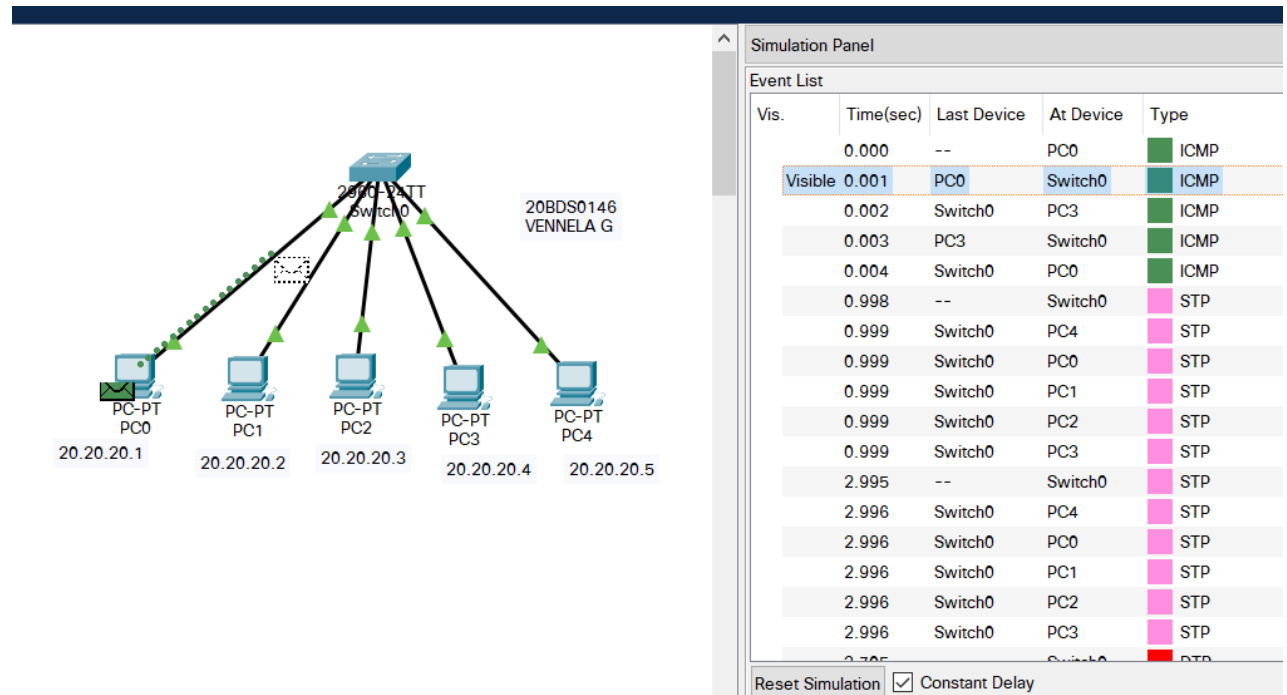
Switch>EN
Switch#show mac-address-table
      Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
1       0050.0f7a.d038   DYNAMIC   Fa0/1
1       0060.7061.2b91   DYNAMIC   Fa0/4
Switch#

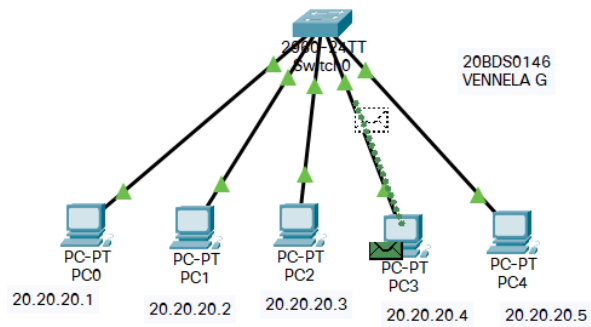
```

Ctrl+F6 to exit CLI focus

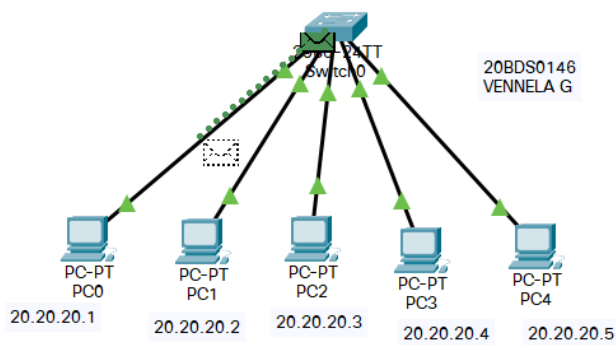
Copy Paste

Simulation Model: (Data transfer between PC0 and PC3)



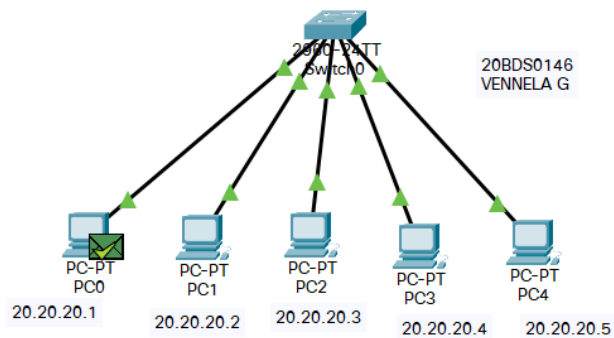


Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.001	PC0	Switch0	ICMP
	0.002	Switch0	PC3	ICMP
Visible	0.003	PC3	Switch0	ICMP
	0.004	Switch0	PC0	ICMP
	0.998	--	Switch0	STP
	0.999	Switch0	PC4	STP
	0.999	Switch0	PC0	STP
	0.999	Switch0	PC1	STP
	0.999	Switch0	PC2	STP
	0.999	Switch0	PC3	STP
	2.995	--	Switch0	STP
	2.996	Switch0	PC4	STP
	2.996	Switch0	PC0	STP
	2.996	Switch0	PC1	STP
	2.996	Switch0	PC2	STP
	2.996	Switch0	PC3	STP
	2.996	Switch0	PC4	STP



Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.001	PC0	Switch0	ICMP
	0.002	Switch0	PC3	ICMP
	0.003	PC3	Switch0	ICMP
Visible	0.004	Switch0	PC0	ICMP
	0.998	--	Switch0	STP
	0.999	Switch0	PC4	STP
	0.999	Switch0	PC0	STP
	0.999	Switch0	PC1	STP
	0.999	Switch0	PC2	STP
	0.999	Switch0	PC3	STP
	2.995	--	Switch0	STP
	2.996	Switch0	PC4	STP
	2.996	Switch0	PC0	STP
	2.996	Switch0	PC1	STP
	2.996	Switch0	PC2	STP
	2.996	Switch0	PC3	STP
	2.996	Switch0	PC4	STP

Reset Simulation ☒ Constant Delay

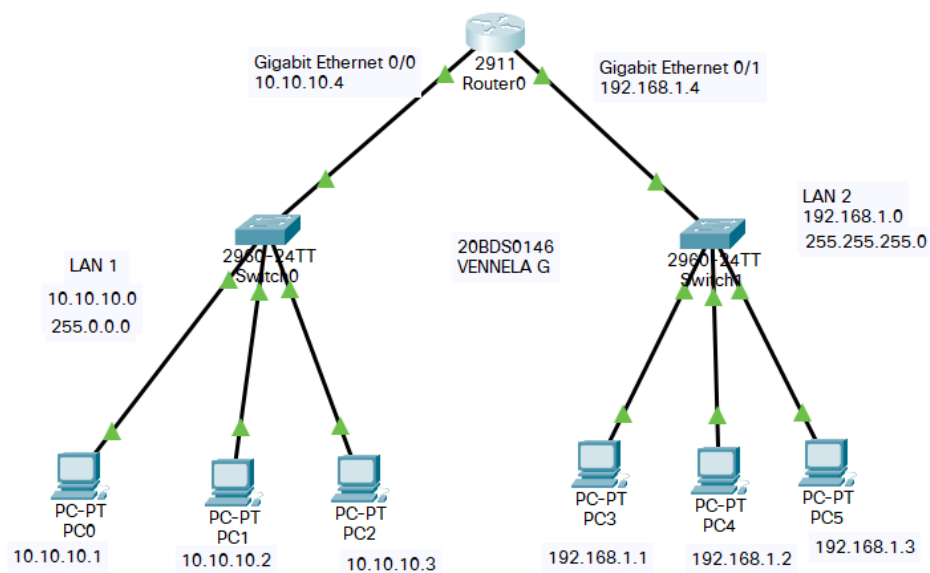


Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.001	PC0	Switch0	ICMP
	0.002	Switch0	PC3	ICMP
	0.003	PC3	Switch0	ICMP
Visible	0.004	Switch0	PC0	ICMP
	0.998	--	Switch0	STP
	0.999	Switch0	PC4	STP
	0.999	Switch0	PC0	STP
	0.999	Switch0	PC1	STP
	0.999	Switch0	PC2	STP
	0.999	Switch0	PC3	STP
	2.995	--	Switch0	STP
	2.996	Switch0	PC4	STP
	2.996	Switch0	PC0	STP
	2.996	Switch0	PC1	STP
	2.996	Switch0	PC2	STP
	2.996	Switch0	PC3	STP
	2.996	Switch0	PC0	STP

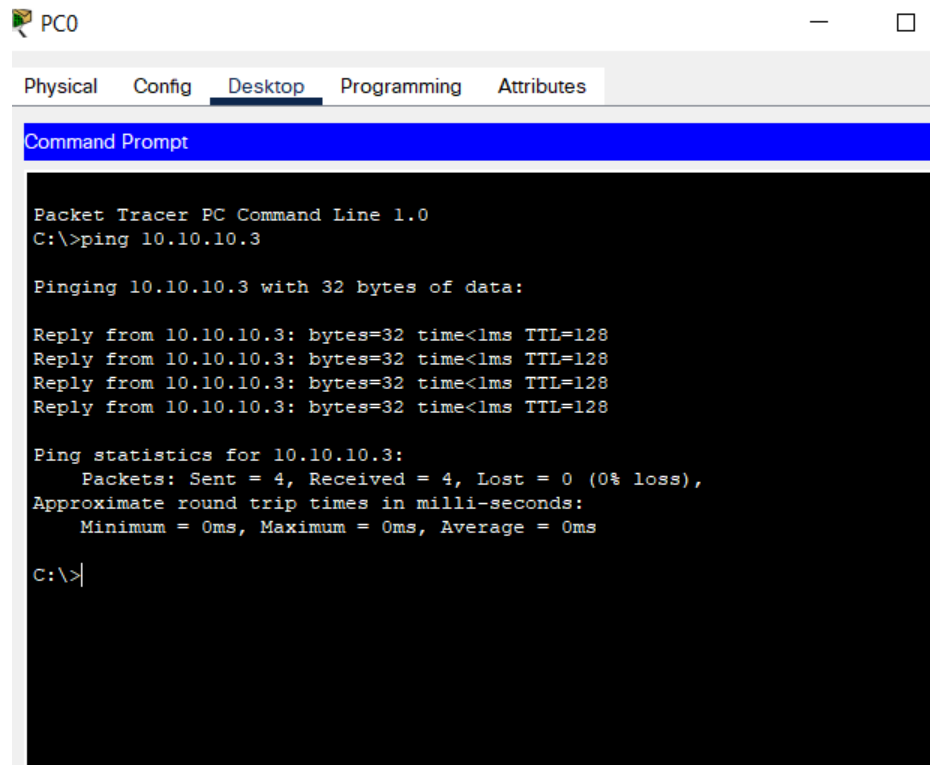
EXERCISE 4

Aim: Create Internetwork i.e. Connect 2 LANs using Routers.

Network:



Checking connection between any two devices in LAN1 :



PC0

Physical Config Desktop Programming Attributes

Command Prompt

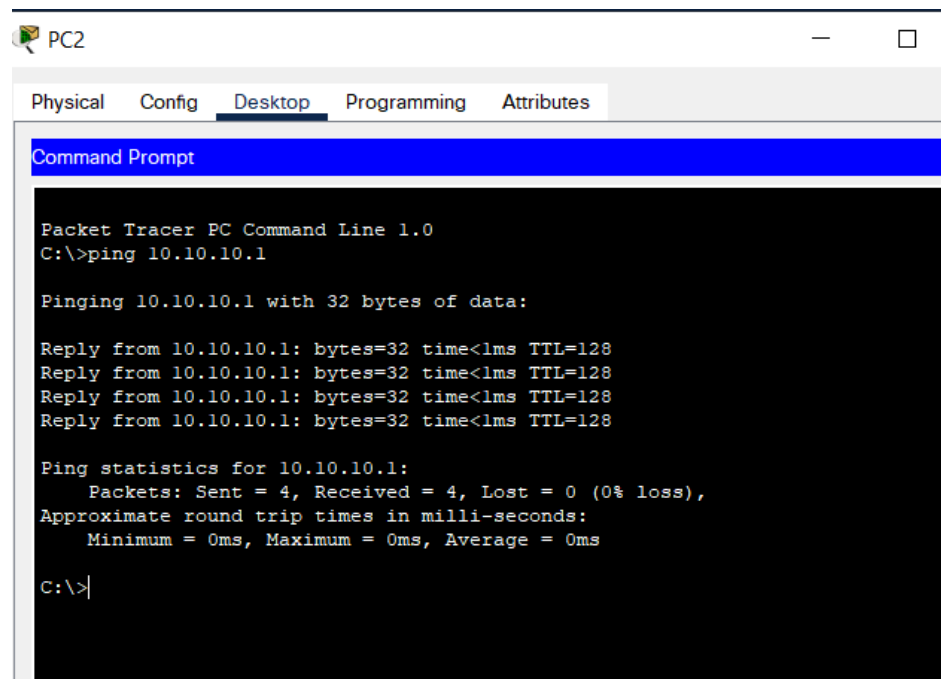
```
Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.3

Pinging 10.10.10.3 with 32 bytes of data:

Reply from 10.10.10.3: bytes=32 time<1ms TTL=128
Reply from 10.10.10.3: bytes=32 time<1ms TTL=128
Reply from 10.10.10.3: bytes=32 time<1ms TTL=128
Reply from 10.10.10.3: bytes=32 time<1ms TTL=128

Ping statistics for 10.10.10.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```



PC2

Physical Config Desktop Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.1

Pinging 10.10.10.1 with 32 bytes of data:

Reply from 10.10.10.1: bytes=32 time<1ms TTL=128
Reply from 10.10.10.1: bytes=32 time<1ms TTL=128
Reply from 10.10.10.1: bytes=32 time<1ms TTL=128
Reply from 10.10.10.1: bytes=32 time<1ms TTL=128

Ping statistics for 10.10.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Checking connection between any two devices in LAN2 :

PC3

Physical Config Desktop Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=10ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 10ms, Average = 2ms

C:\>|
```

PC5

Physical Config Desktop Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

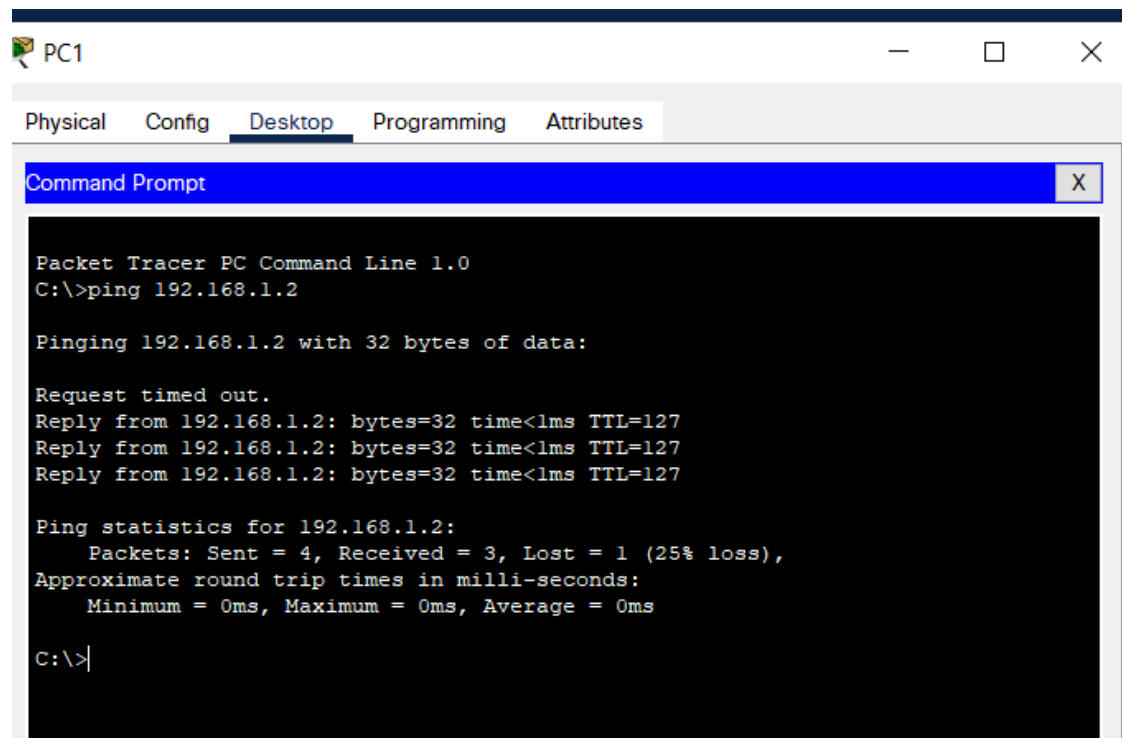
Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```


Checking connection between any two devices in LAN1 and LAN2:



The screenshot shows a Packet Tracer PC window for PC1. The 'Desktop' tab is selected, and a 'Command Prompt' window is open. The command prompt displays the output of a 'ping 192.168.1.2' command. The output indicates that the ping failed with a 'Request timed out' message. The ping statistics show that 4 packets were sent, 3 were received, and 1 was lost (25% loss). The approximate round trip times in milliseconds are: Minimum = 0ms, Maximum = 0ms, Average = 0ms.

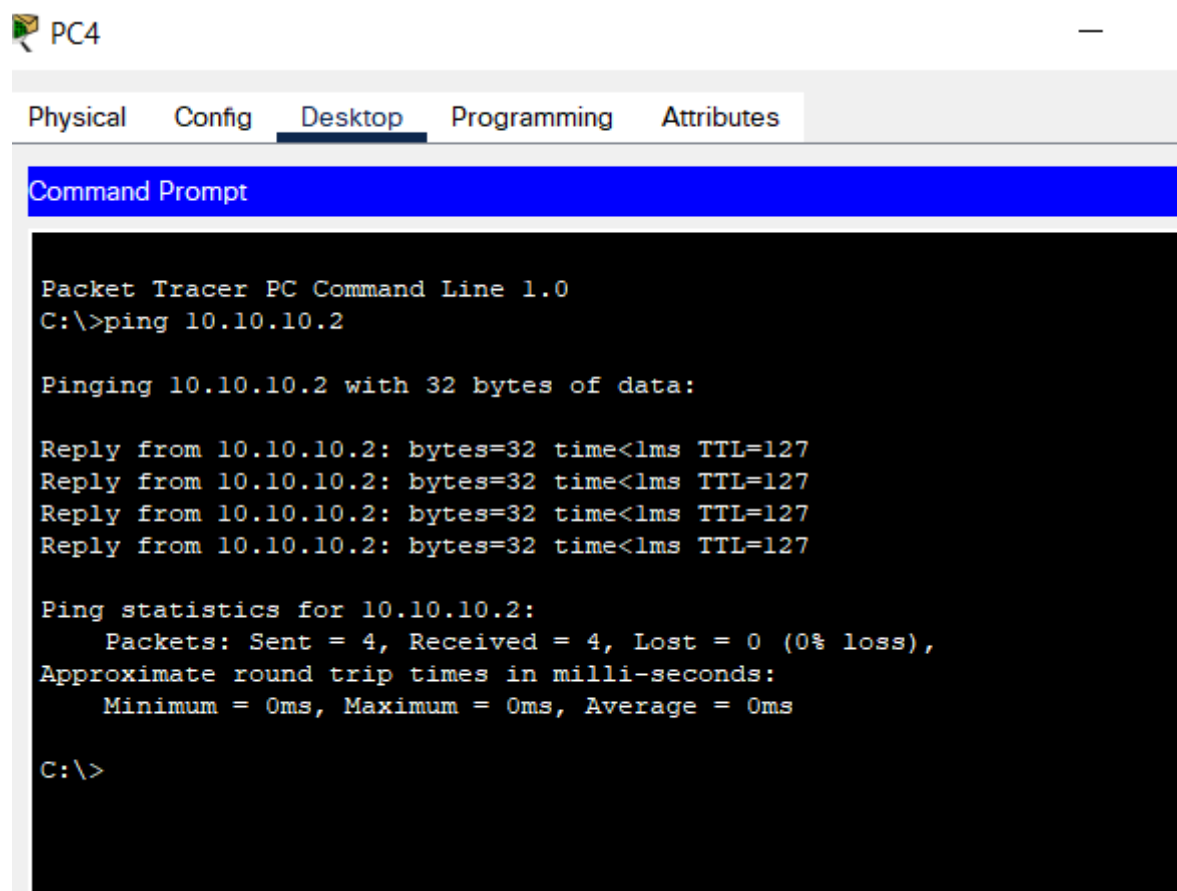
```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.1.2: bytes=32 time<1ms TTL=127
Reply from 192.168.1.2: bytes=32 time<1ms TTL=127
Reply from 192.168.1.2: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```



The screenshot shows a Packet Tracer PC window for PC4. The 'Desktop' tab is selected, and a 'Command Prompt' window is open. The command prompt displays the output of a 'ping 10.10.10.2' command. The output indicates that the ping was successful, with all 4 packets received and 0% loss. The approximate round trip times in milliseconds are: Minimum = 0ms, Maximum = 0ms, Average = 0ms.

```
Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.2

Pinging 10.10.10.2 with 32 bytes of data:

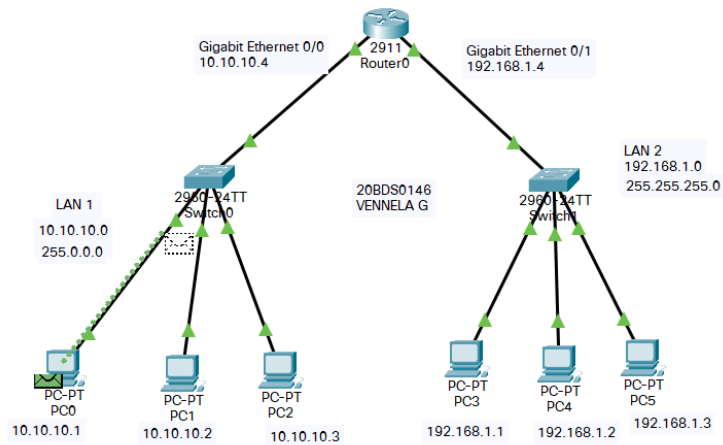
Reply from 10.10.10.2: bytes=32 time<1ms TTL=127
Reply from 10.10.10.2: bytes=32 time<1ms TTL=127
Reply from 10.10.10.2: bytes=32 time<1ms TTL=127
Reply from 10.10.10.2: bytes=32 time<1ms TTL=127

Ping statistics for 10.10.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Simulation Model: (Data transfer between PC0 and PC3)

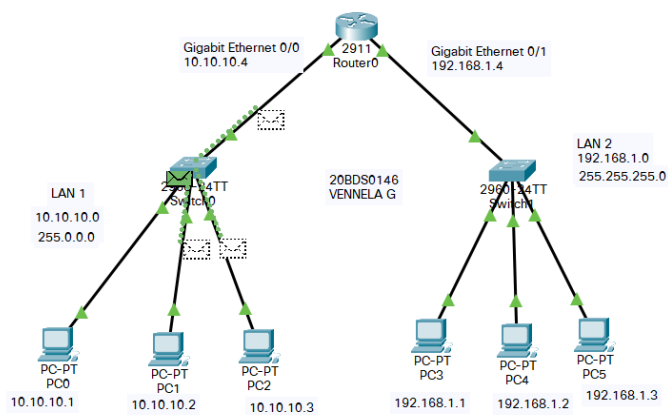
When transferring packet for first time: (it broadcasts)



Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
Visible	0.001	PC0	Switch0	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	PC2	ARP
	0.002	Switch0	Router0	ARP

Reset Simulation ☒ Constant Delay

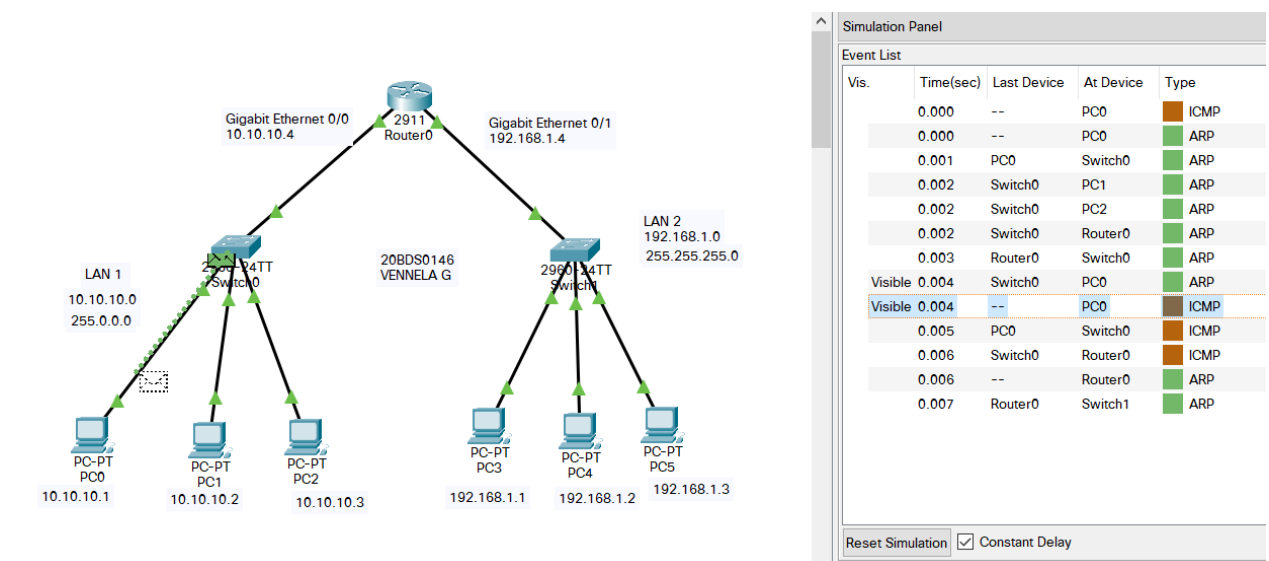
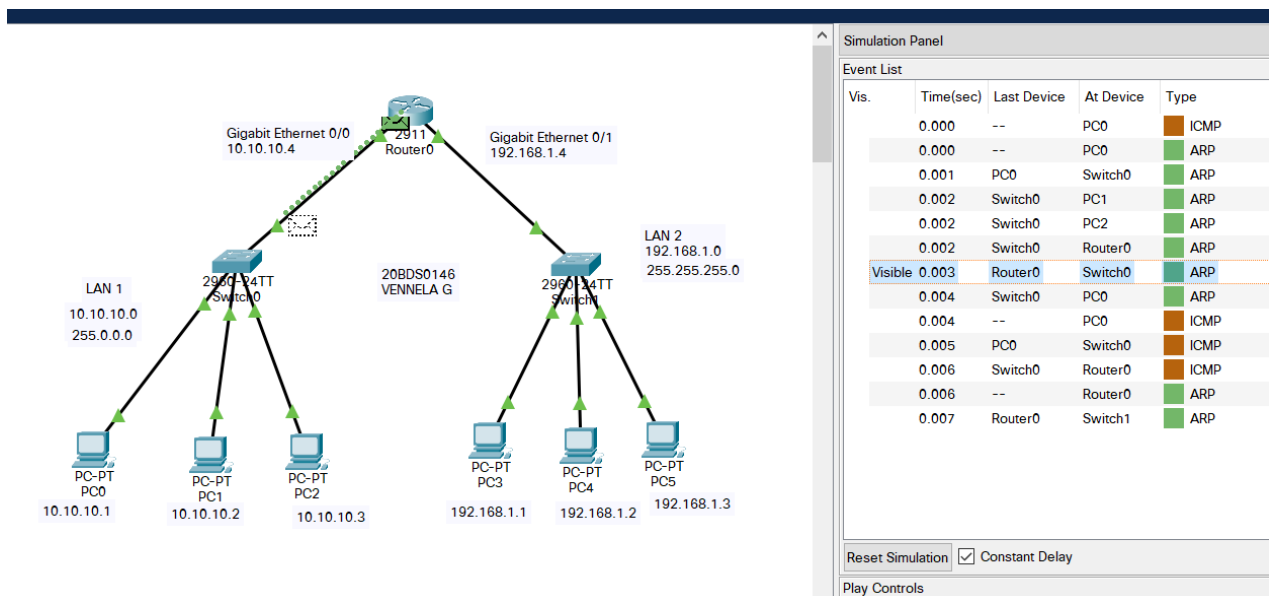
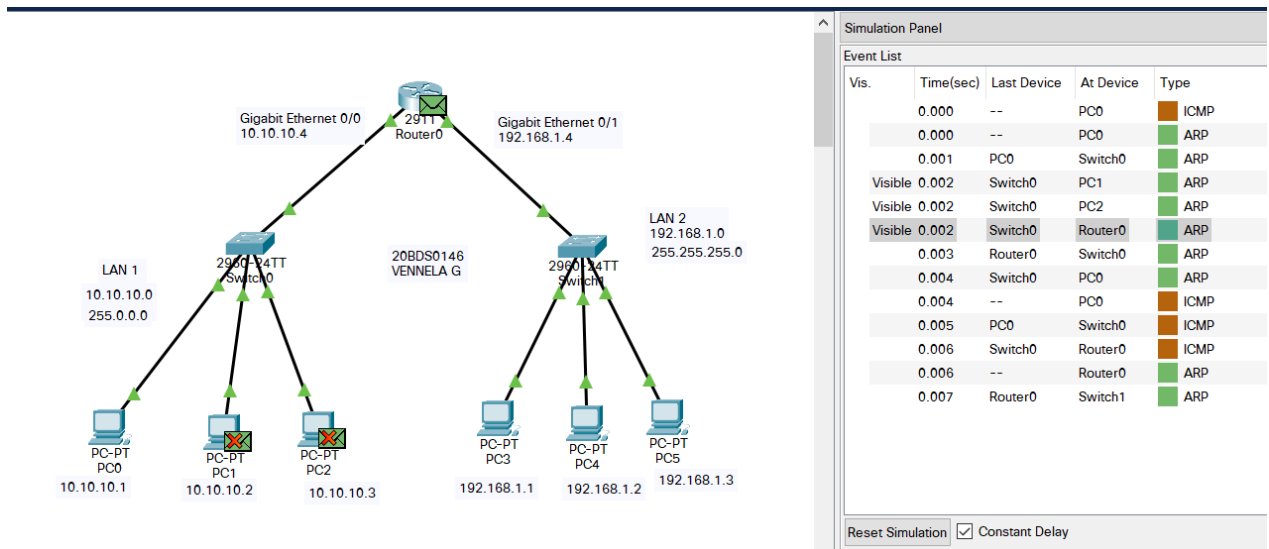
Play Controls

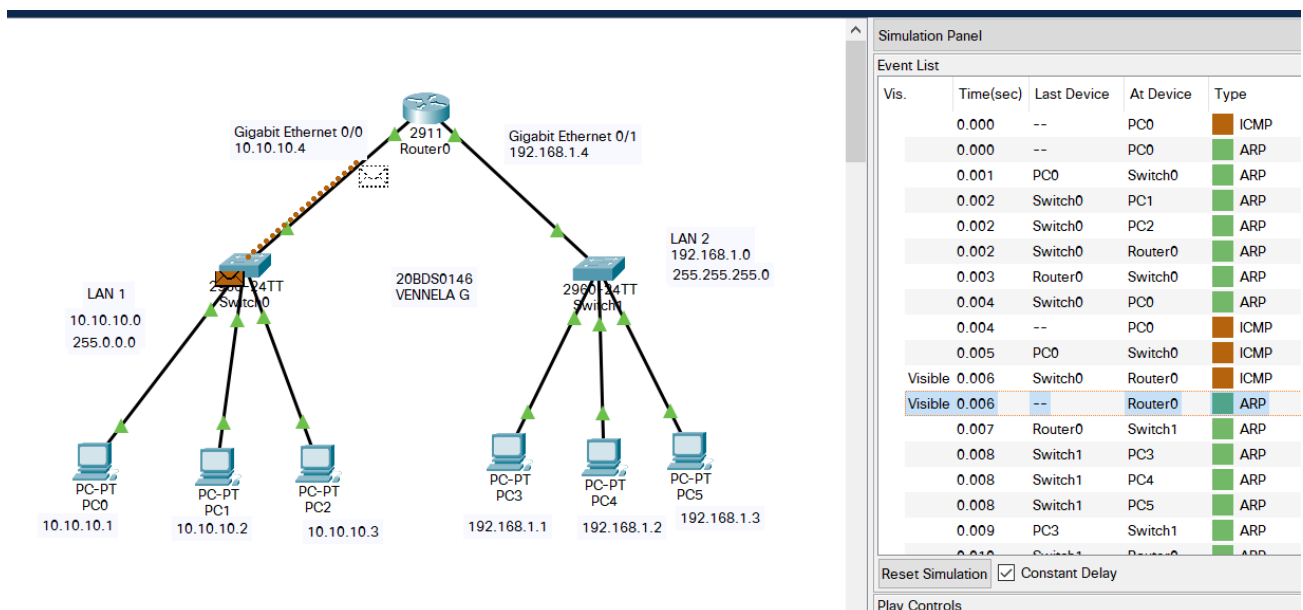
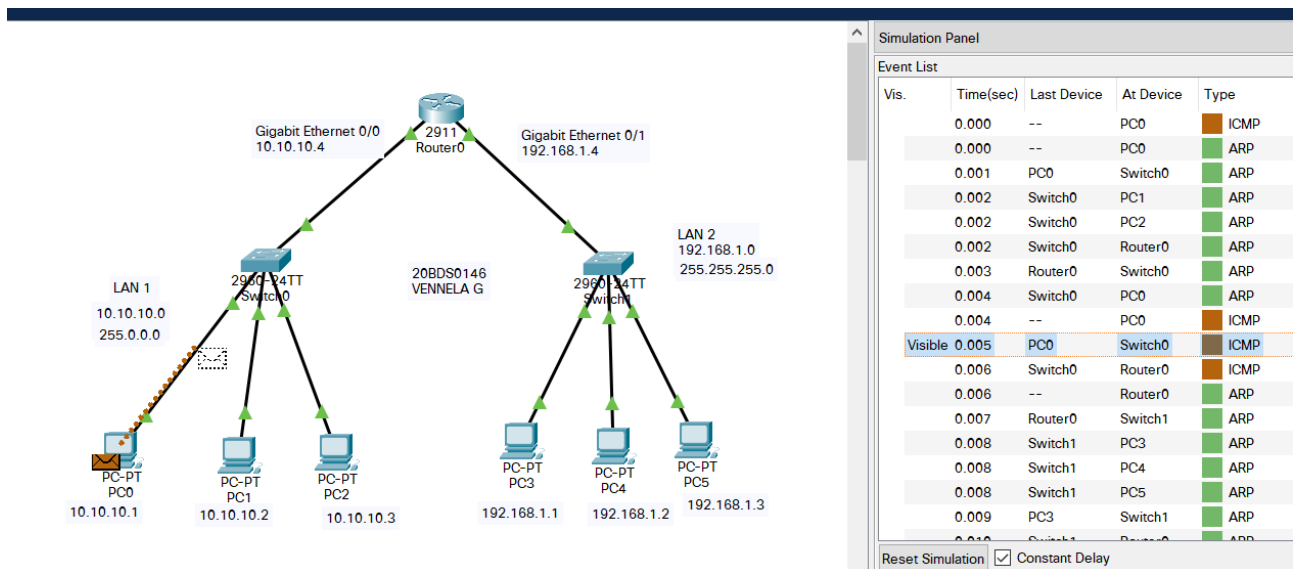
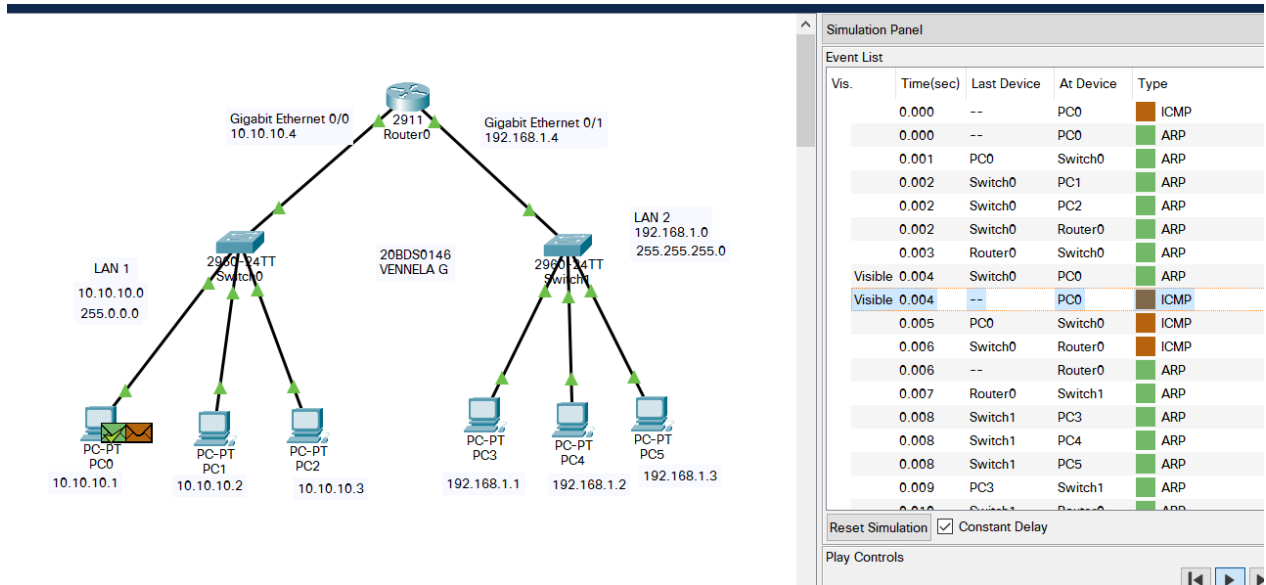


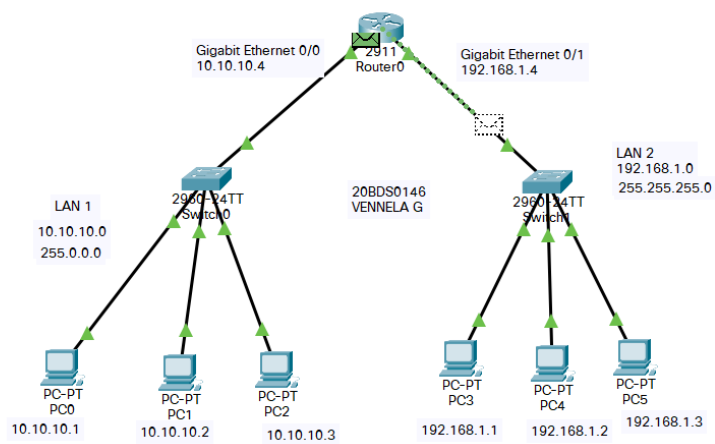
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Switch0	ARP
Visible	0.002	Switch0	PC1	ARP
Visible	0.002	Switch0	PC2	ARP
Visible	0.002	Switch0	Router0	ARP
	0.003	Router0	Switch0	ARP
	0.004	Switch0	PC0	ARP
	0.004	--	PC0	ICMP
	0.005	PC0	Switch0	ICMP
	0.006	Switch0	Router0	ICMP
	0.006	--	Router0	ARP
	0.007	Router0	Switch1	ARP

Reset Simulation ☒ Constant Delay

Play Controls



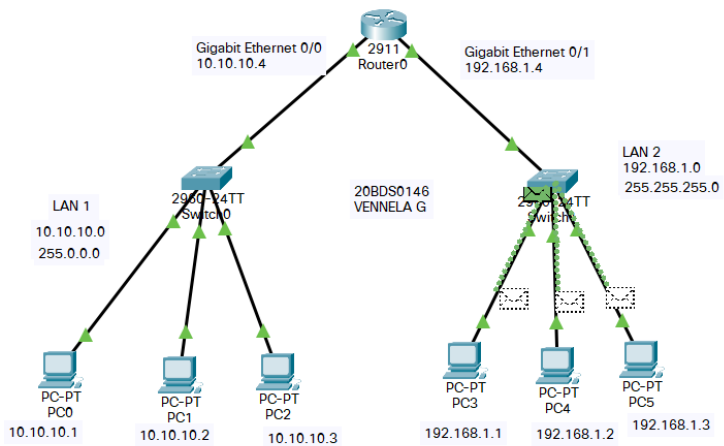




Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Switch0	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	PC2	ARP
	0.002	Switch0	Router0	ARP
	0.003	Router0	Switch0	ARP
	0.004	Switch0	PC0	ARP
	0.004	--	PC0	ICMP
	0.005	PC0	Switch0	ICMP
	0.006	Switch0	Router0	ICMP
	0.006	--	Router0	ARP
Visible	0.007	Router0	Switch1	ARP
	0.008	Switch1	PC3	ARP
	0.008	Switch1	PC4	ARP
	0.008	Switch1	PC5	ARP
	0.009	PC3	Switch1	ARP
	0.009	PC4	Switch1	ARP
	0.009	PC5	Switch1	ARP

Reset Simulation ☒ Constant Delay

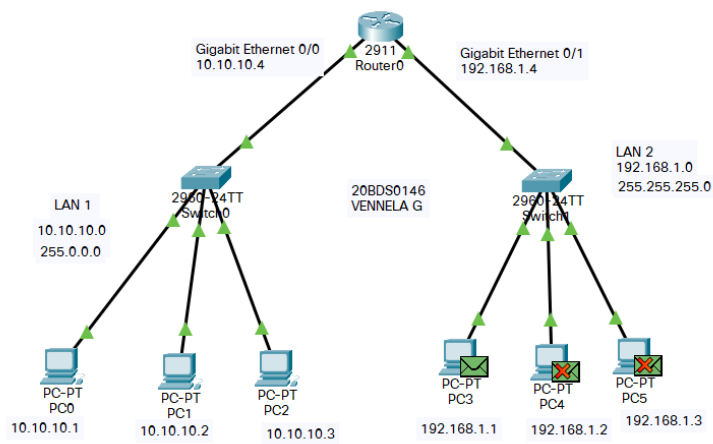
Play Controls



Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Switch0	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	PC2	ARP
	0.002	Switch0	Router0	ARP
	0.003	Router0	Switch0	ARP
	0.004	Switch0	PC0	ARP
	0.004	--	PC0	ICMP
	0.005	PC0	Switch0	ICMP
	0.006	Switch0	Router0	ICMP
	0.006	--	Router0	ARP
	0.007	Router0	Switch1	ARP
Visible	0.008	Switch1	PC3	ARP
Visible	0.008	Switch1	PC4	ARP
Visible	0.008	Switch1	PC5	ARP
	0.009	PC3	Switch1	ARP
	0.009	PC4	Switch1	ARP
	0.009	PC5	Switch1	ARP

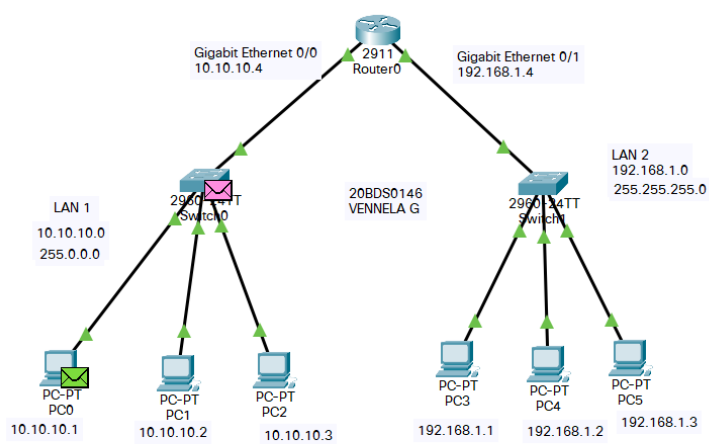
Reset Simulation ☒ Constant Delay

Play Controls



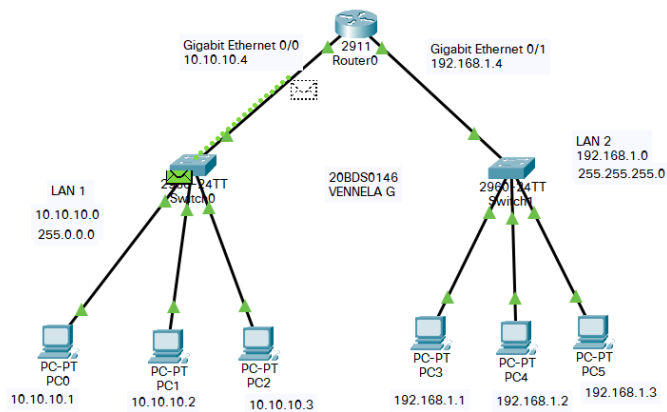
Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Switch0	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	PC2	ARP
	0.002	Switch0	Router0	ARP
	0.003	Router0	Switch0	ARP
	0.004	Switch0	PC0	ARP
	0.004	--	PC0	ICMP
	0.005	PC0	Switch0	ICMP
	0.006	Switch0	Router0	ICMP
	0.006	--	Router0	ARP
	0.007	Router0	Switch1	ARP
Visible	0.008	Switch1	PC3	ARP
Visible	0.008	Switch1	PC4	ARP
Visible	0.008	Switch1	PC5	ARP
	0.009	PC3	Switch1	ARP
	0.009	Switch1	Router0	ARP
Reset Simulation <input checked="" type="checkbox"/> Constant Delay				
Play Controls				

When transferring packet after learning: (it doesn't broadcast)



Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.004	--	PC0	ICMP
	0.005	PC0	Switch0	ICMP
	0.006	Switch0	Router0	ICMP
	0.006	--	Router0	ARP
	0.007	Router0	Switch1	ARP
	0.008	Switch1	PC3	ARP
	0.008	Switch1	PC4	ARP
	0.008	Switch1	PC5	ARP
	0.009	PC3	Switch1	ARP
	0.010	Switch1	Router0	ARP
	0.850	--	Switch1	STP
	0.851	Switch1	PC4	STP
	0.851	Switch1	PC3	STP
	0.851	Switch1	PC5	STP
	0.851	Switch1	Router0	STP
Visible	0.859	--	Switch0	STP
Visible	0.859	--	PC0	ICMP
	0.859	Switch0	Router0	STP
Reset Simulation <input checked="" type="checkbox"/> Constant Delay				
Play Controls				

y: 42



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.008	Switch1	PC4	ARP
	0.008	Switch1	PC5	ARP
	0.009	PC3	Switch1	ARP
	0.010	Switch1	Router0	ARP
	0.850	--	Switch1	STP
	0.851	Switch1	PC4	STP
	0.851	Switch1	PC3	STP
	0.851	Switch1	PC5	STP
	0.851	Switch1	Router0	STP
	0.859	--	Switch0	STP
	0.859	--	PC0	ICMP
	0.860	Switch0	Router0	STP
	0.860	Switch0	PC2	STP
	0.860	Switch0	PC0	STP
	0.860	Switch0	PC1	STP
	0.860	PC0	Switch0	ICMP
Visible	0.861	Switch0	Router0	ICMP

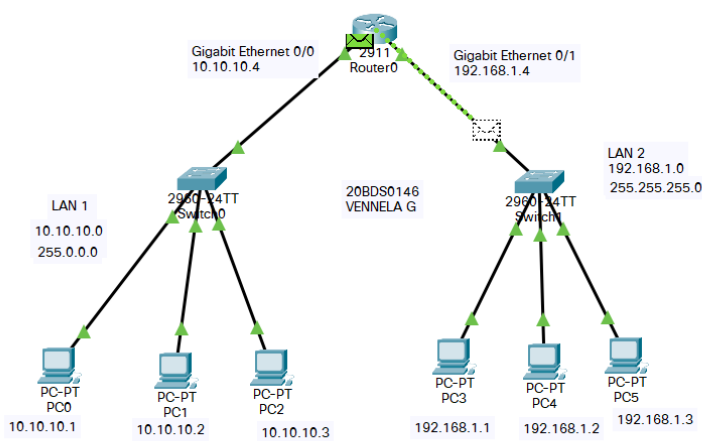
Reset Simulation

☒ Constant Delay

Play Controls



42



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.008	Switch1	PC5	ARP
	0.009	PC3	Switch1	ARP
	0.010	Switch1	Router0	ARP
	0.850	--	Switch1	STP
	0.851	Switch1	PC4	STP
	0.851	Switch1	PC3	STP
	0.851	Switch1	PC5	STP
	0.851	Switch1	Router0	STP
	0.859	--	Switch0	STP
	0.859	--	PC0	ICMP
	0.860	Switch0	Router0	STP
	0.860	Switch0	PC2	STP
	0.860	Switch0	PC0	STP
	0.860	Switch0	PC1	STP
	0.860	PC0	Switch0	ICMP
	0.861	Switch0	Router0	ICMP
Visible	0.862	Router0	Switch1	ICMP

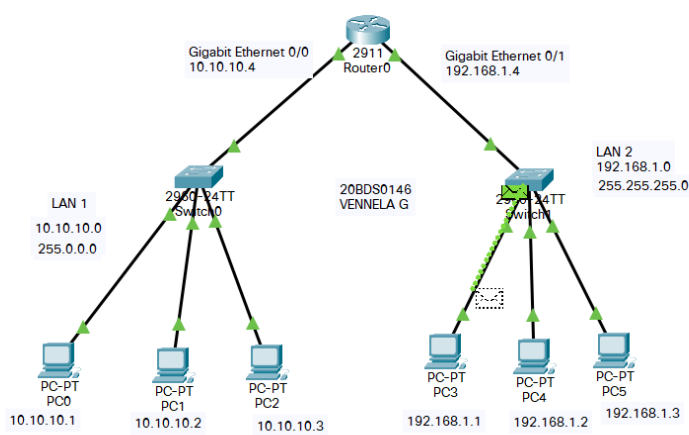
Reset Simulation

☒ Constant Delay

Play Controls



5, y: 42



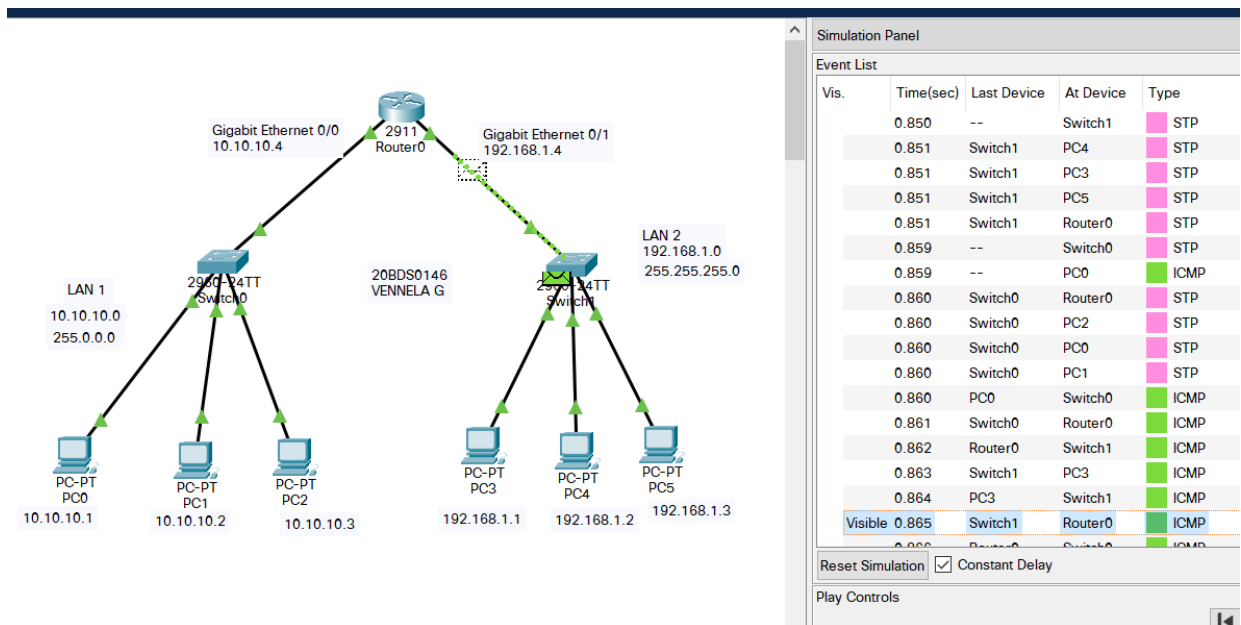
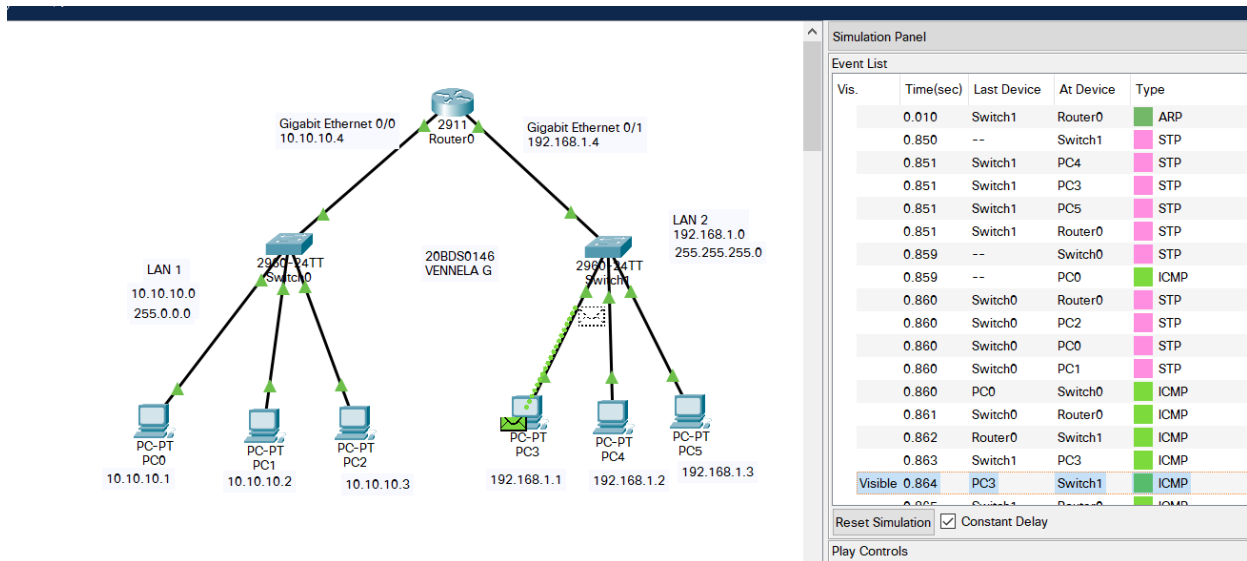
Simulation Panel

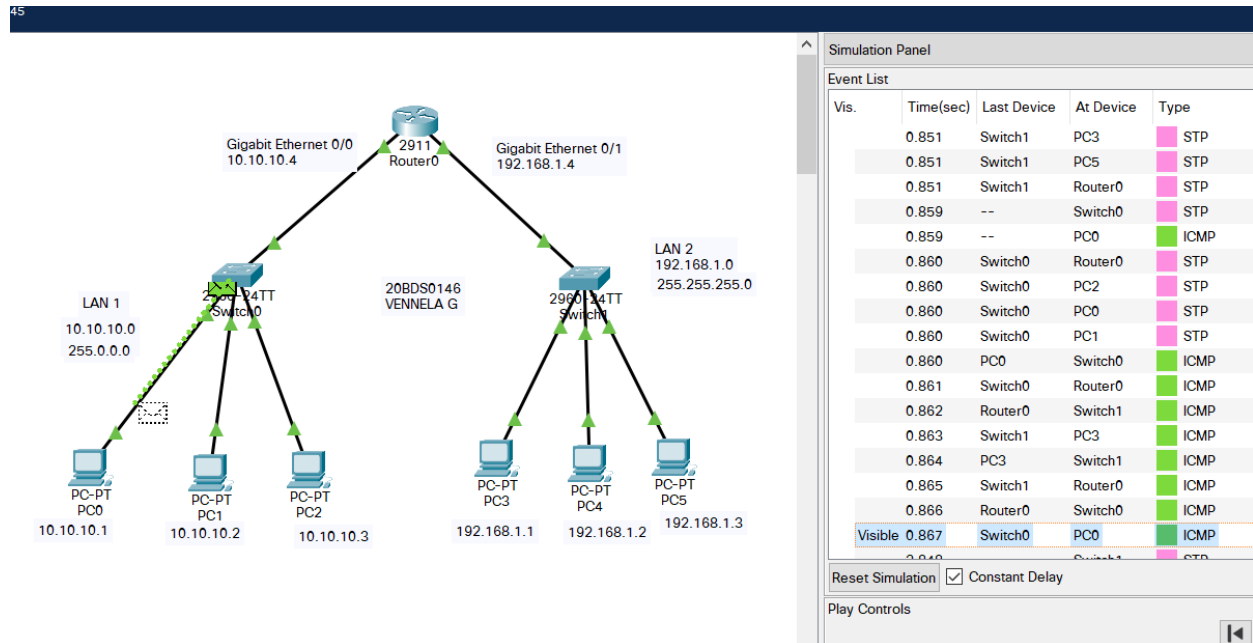
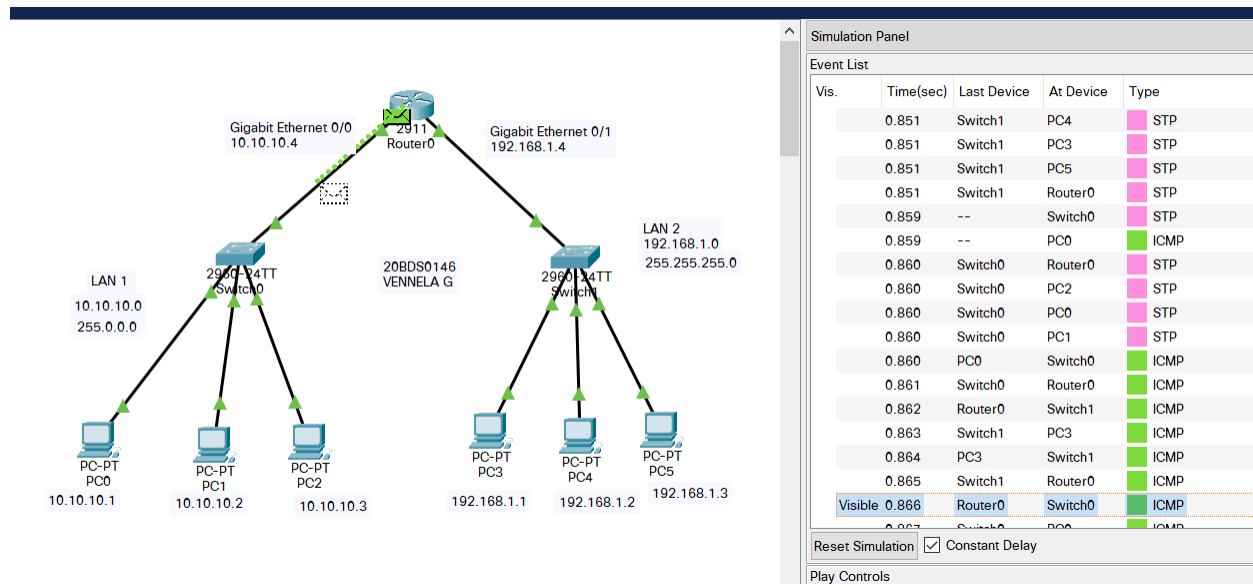
Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.009	PC3	Switch1	ARP
	0.010	Switch1	Router0	ARP
	0.850	--	Switch1	STP
	0.851	Switch1	PC4	STP
	0.851	Switch1	PC3	STP
	0.851	Switch1	PC5	STP
	0.851	Switch1	Router0	STP
	0.859	--	Switch0	STP
	0.859	--	PC0	ICMP
	0.860	Switch0	Router0	STP
	0.860	Switch0	PC2	STP
	0.860	Switch0	PC0	STP
	0.860	Switch0	PC1	STP
	0.860	PC0	Switch0	ICMP
	0.861	Switch0	Router0	ICMP
	0.862	Router0	Switch1	ICMP
Visible	0.863	Switch1	PC3	ICMP

Reset Simulation

☒ Constant Delay

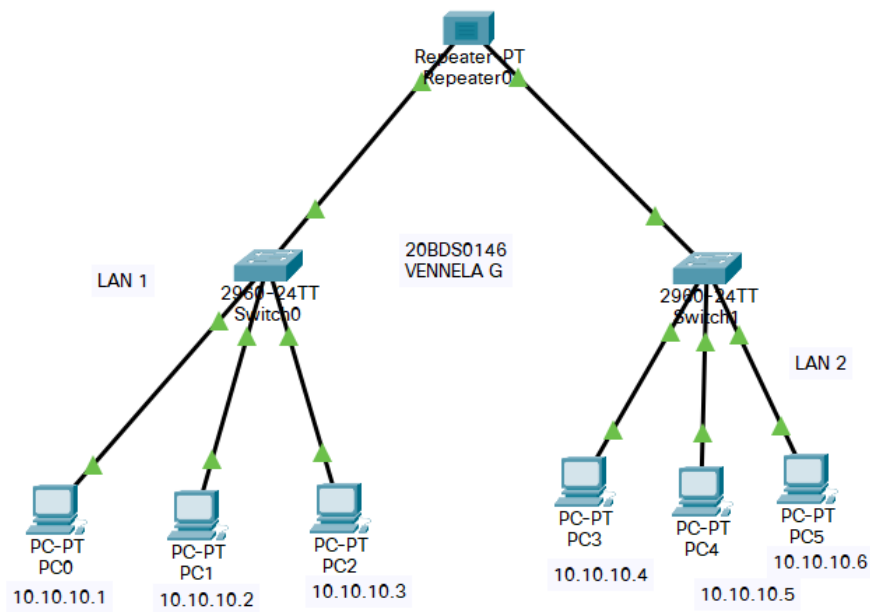




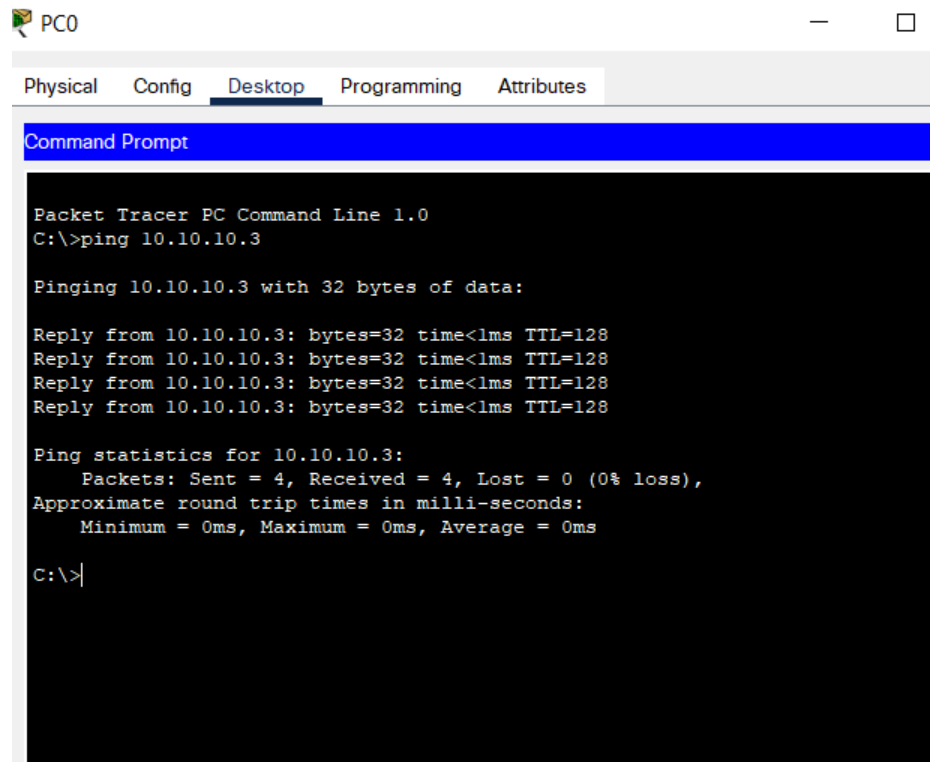
EXERCISE 5

Aim: Create Internetwork i.e. Connect 2 LANs using Repeater

Network:



Checking connection between any two devices in LAN1:



PC0

Physical Config Desktop Programming Attributes

Command Prompt

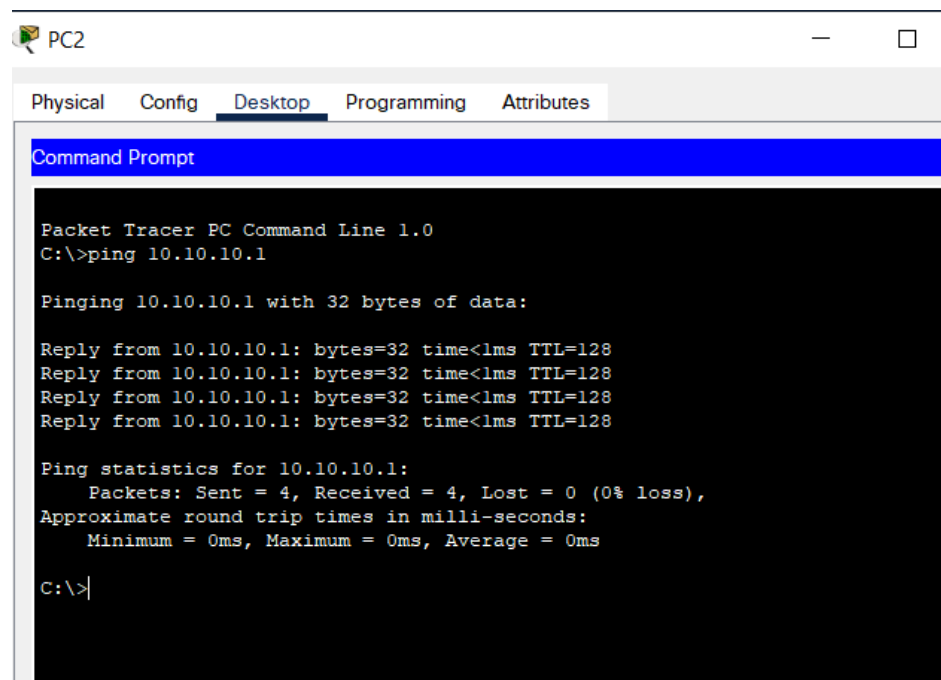
```
Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.3

Pinging 10.10.10.3 with 32 bytes of data:

Reply from 10.10.10.3: bytes=32 time<1ms TTL=128
Reply from 10.10.10.3: bytes=32 time<1ms TTL=128
Reply from 10.10.10.3: bytes=32 time<1ms TTL=128
Reply from 10.10.10.3: bytes=32 time<1ms TTL=128

Ping statistics for 10.10.10.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```



PC2

Physical Config Desktop Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.1

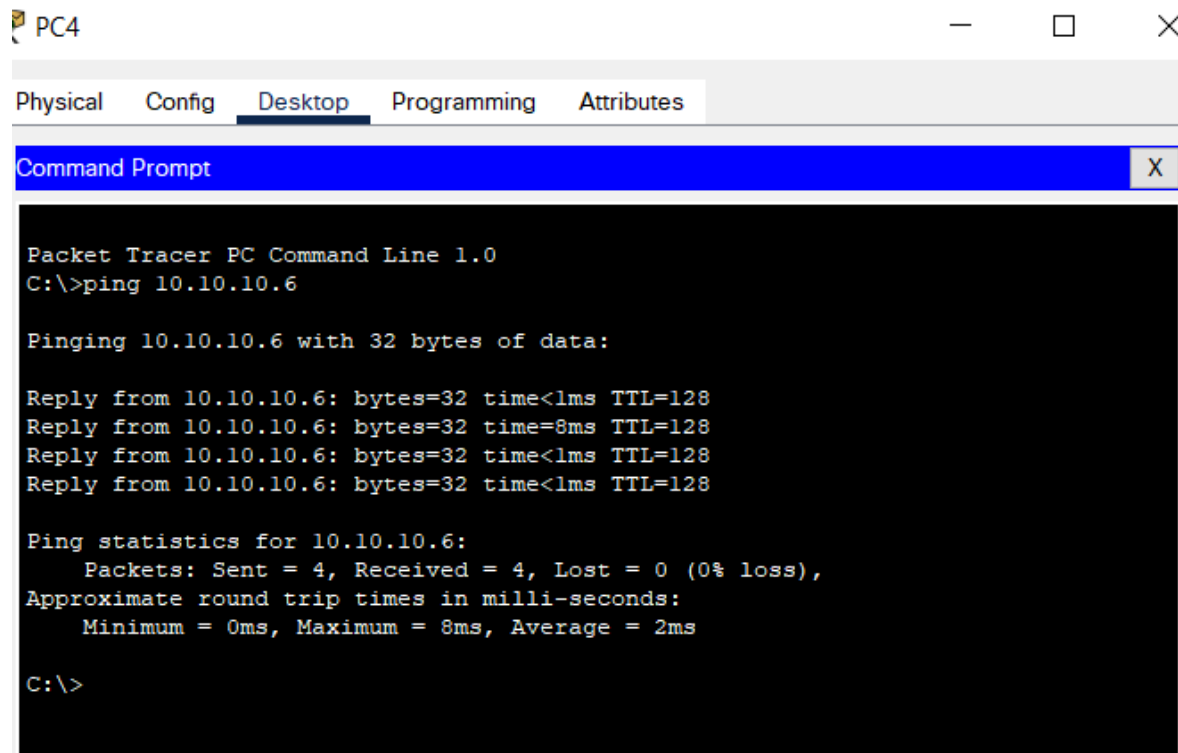
Pinging 10.10.10.1 with 32 bytes of data:

Reply from 10.10.10.1: bytes=32 time<1ms TTL=128
Reply from 10.10.10.1: bytes=32 time<1ms TTL=128
Reply from 10.10.10.1: bytes=32 time<1ms TTL=128
Reply from 10.10.10.1: bytes=32 time<1ms TTL=128

Ping statistics for 10.10.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```

Checking connection between any two devices in LAN2:



PC4

Physical Config **Desktop** Programming Attributes

Command Prompt

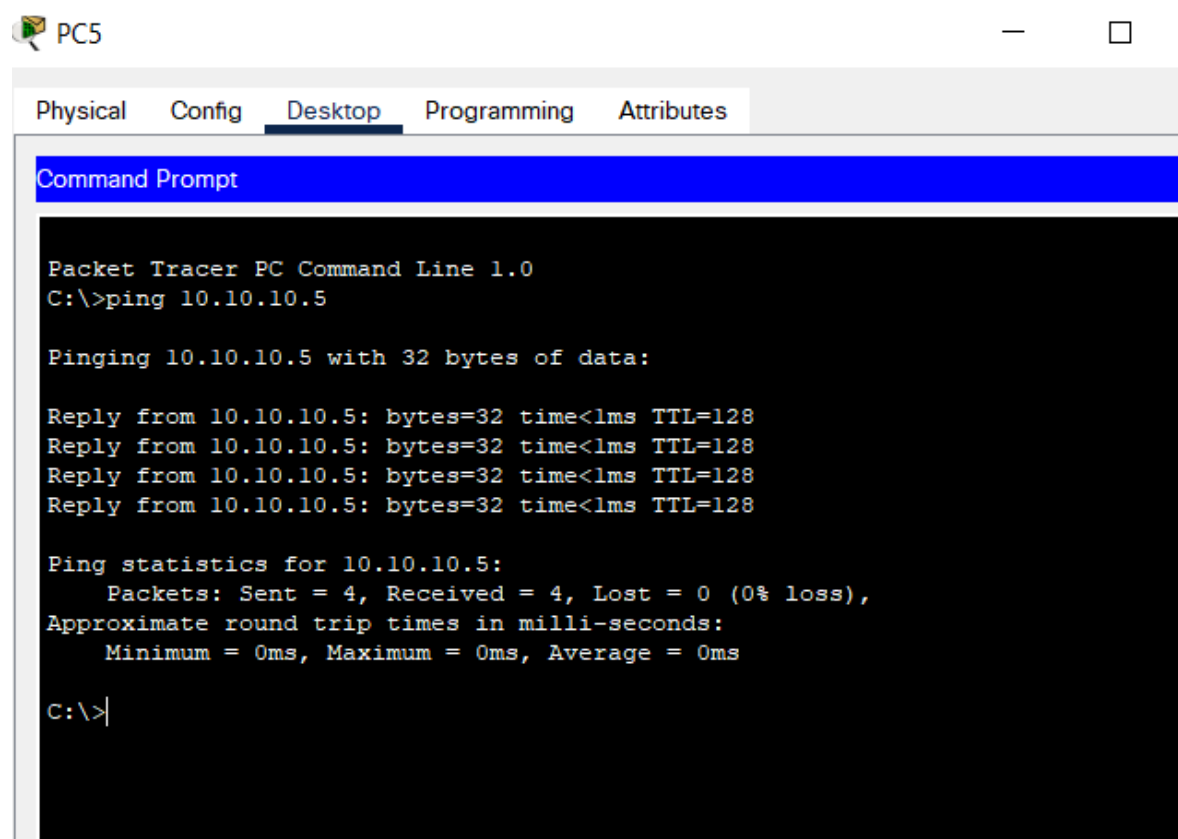
```
Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.6

Pinging 10.10.10.6 with 32 bytes of data:

Reply from 10.10.10.6: bytes=32 time<1ms TTL=128
Reply from 10.10.10.6: bytes=32 time=8ms TTL=128
Reply from 10.10.10.6: bytes=32 time<1ms TTL=128
Reply from 10.10.10.6: bytes=32 time<1ms TTL=128

Ping statistics for 10.10.10.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 2ms

C:\>
```



PC5

Physical Config **Desktop** Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.5

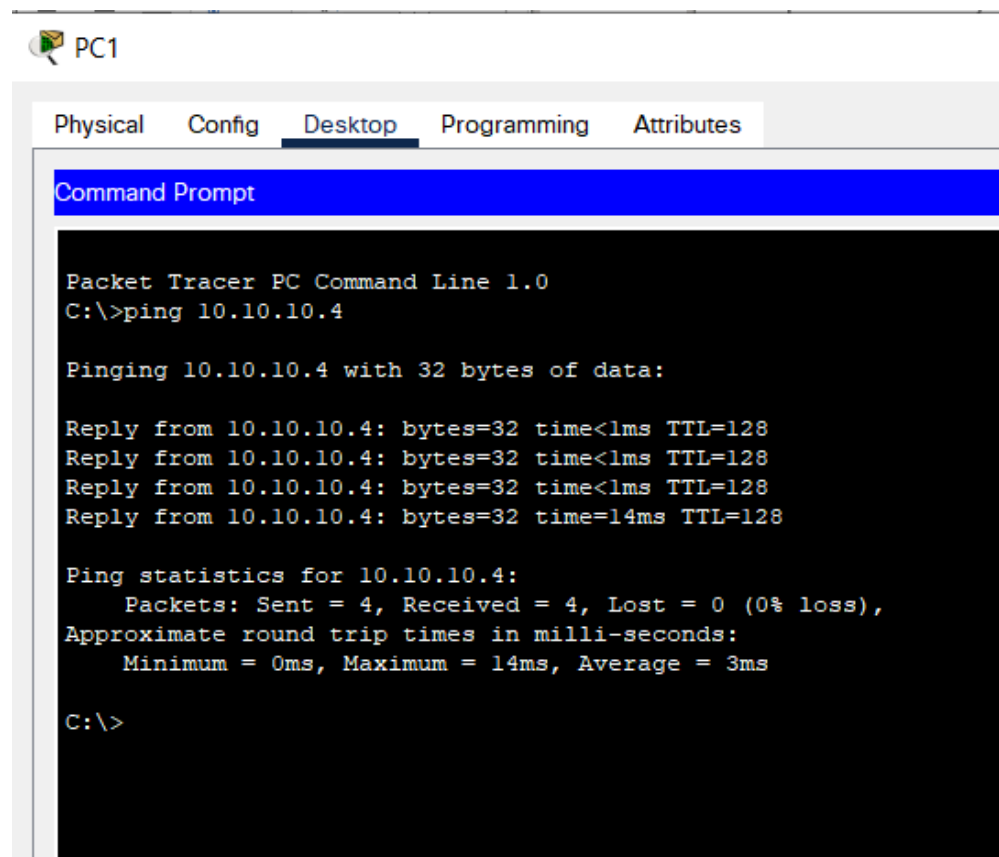
Pinging 10.10.10.5 with 32 bytes of data:

Reply from 10.10.10.5: bytes=32 time<1ms TTL=128
Reply from 10.10.10.5: bytes=32 time<1ms TTL=128
Reply from 10.10.10.5: bytes=32 time<1ms TTL=128
Reply from 10.10.10.5: bytes=32 time<1ms TTL=128

Ping statistics for 10.10.10.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Checking connection between any two devices in LAN1 & LAN2 :



The screenshot shows the Packet Tracer interface for PC1. The 'Desktop' tab is selected, displaying a 'Command Prompt' window. The command prompt shows the execution of a ping command to 10.10.10.4, which is successful. The output includes details about the data size (32 bytes), TTL (128), and round trip times (0ms to 14ms). Ping statistics show 4 packets sent, 4 received, and 0% loss.

```
Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.4

Pinging 10.10.10.4 with 32 bytes of data:

Reply from 10.10.10.4: bytes=32 time<1ms TTL=128
Reply from 10.10.10.4: bytes=32 time<1ms TTL=128
Reply from 10.10.10.4: bytes=32 time<1ms TTL=128
Reply from 10.10.10.4: bytes=32 time=14ms TTL=128

Ping statistics for 10.10.10.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 14ms, Average = 3ms

C:\>
```

PC3

Physical Config **Desktop** Programming Attributes

Command Prompt

```

Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.2

Pinging 10.10.10.2 with 32 bytes of data:

Reply from 10.10.10.2: bytes=32 time=15ms TTL=128
Reply from 10.10.10.2: bytes=32 time<1ms TTL=128
Reply from 10.10.10.2: bytes=32 time=14ms TTL=128
Reply from 10.10.10.2: bytes=32 time<1ms TTL=128

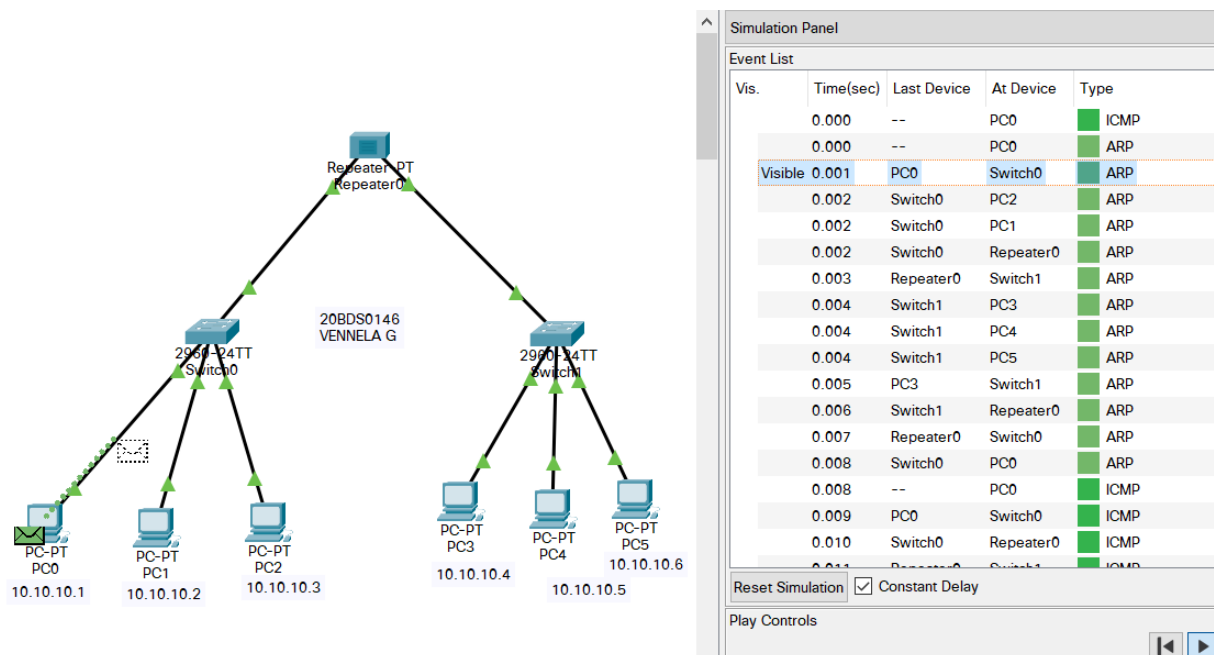
Ping statistics for 10.10.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 15ms, Average = 7ms

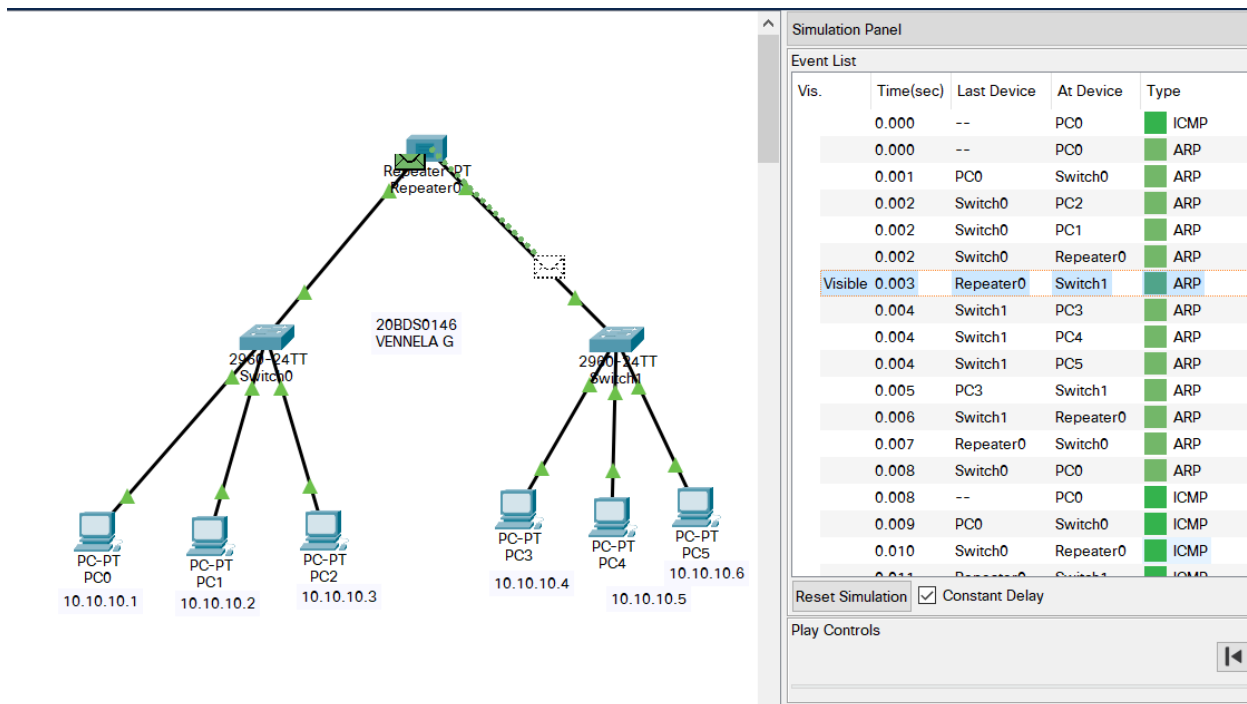
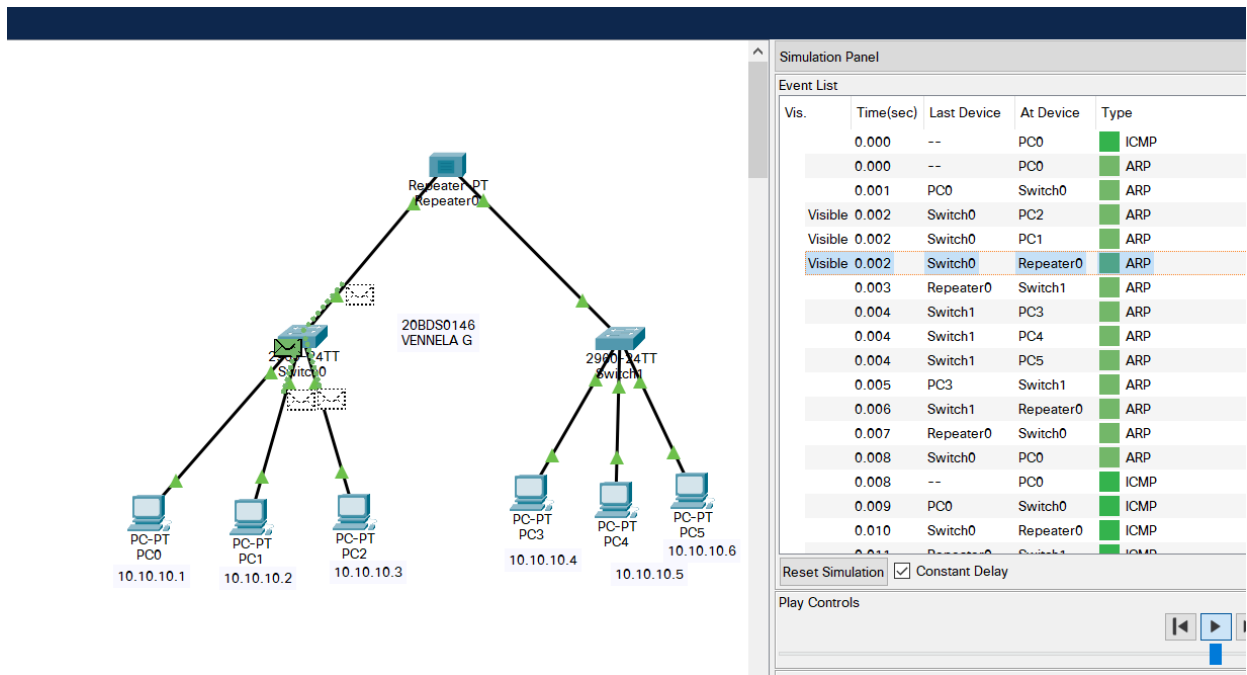
C:\>

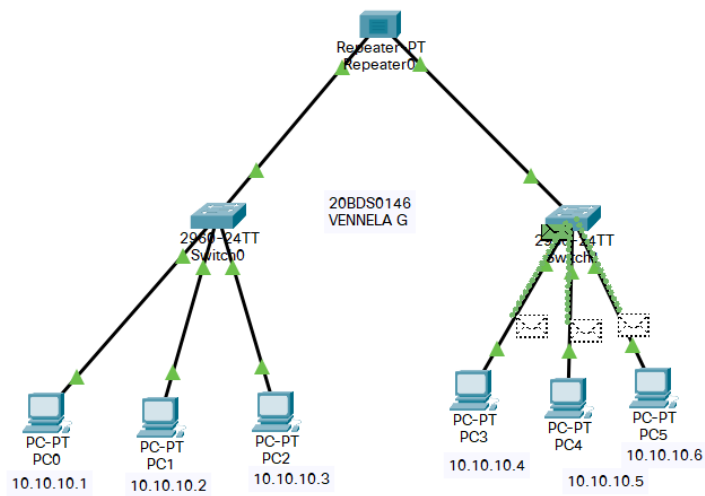
```

Simulation Model: (Data transfer between PC0 and PC3)

When transferring packet for first time: (it broadcasts)



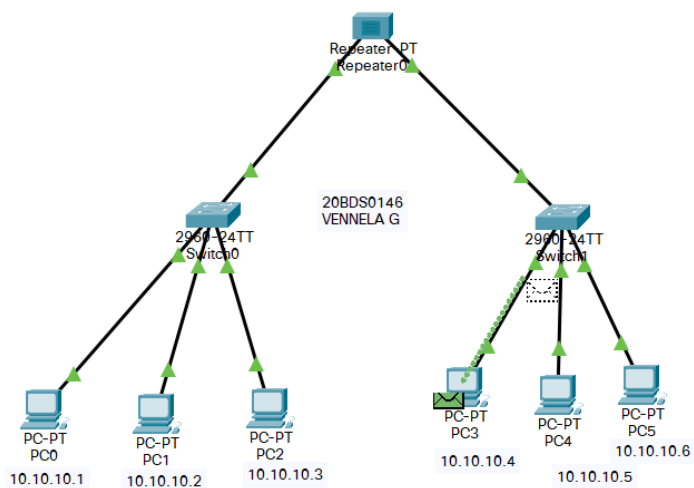




Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Switch0	ARP
	0.002	Switch0	PC2	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	Repeater0	ARP
	0.003	Repeater0	Switch1	ARP
Visible	0.004	Switch1	PC3	ARP
Visible	0.004	Switch1	PC4	ARP
Visible	0.004	Switch1	PC5	ARP
	0.005	PC3	Switch1	ARP
	0.006	Switch1	Repeater0	ARP
	0.007	Repeater0	Switch0	ARP
	0.008	Switch0	PC0	ARP
	0.008	--	PC0	ICMP
	0.009	PC0	Switch0	ICMP
	0.010	Switch0	Repeater0	ICMP
	0.011	Repeater0	Switch1	ICMP

Reset Simulation ☒ Constant Delay

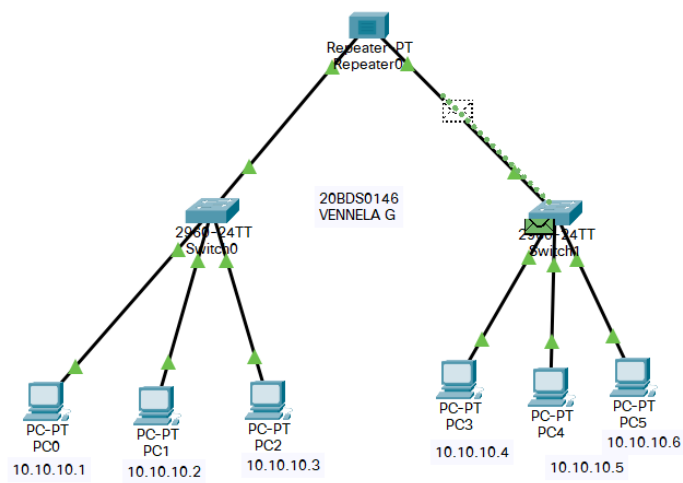
Play Controls



Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Switch0	ARP
	0.002	Switch0	PC2	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	Repeater0	ARP
	0.003	Repeater0	Switch1	ARP
	0.004	Switch1	PC3	ARP
	0.004	Switch1	PC4	ARP
	0.004	Switch1	PC5	ARP
Visible	0.005	PC3	Switch1	ARP
	0.006	Switch1	Repeater0	ARP
	0.007	Repeater0	Switch0	ARP
	0.008	Switch0	PC0	ARP
	0.008	--	PC0	ICMP
	0.009	PC0	Switch0	ICMP
	0.010	Switch0	Repeater0	ICMP
	0.011	Repeater0	Switch1	ICMP

Reset Simulation ☒ Constant Delay

Play Controls



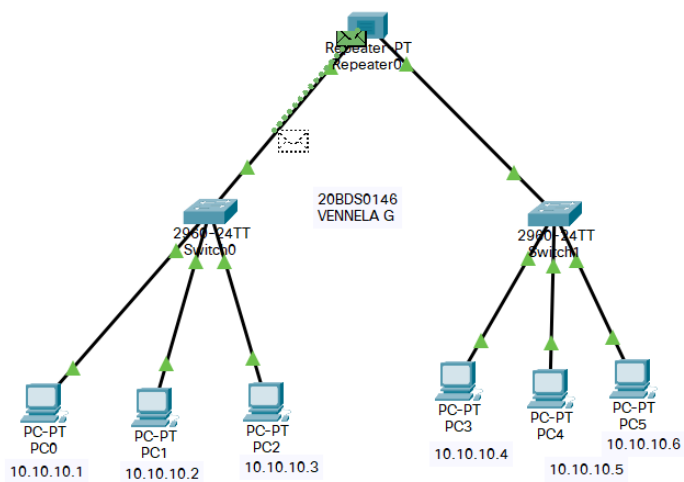
Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Switch0	ARP
	0.002	Switch0	PC2	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	Repeater0	ARP
	0.003	Repeater0	Switch1	ARP
	0.004	Switch1	PC3	ARP
	0.004	Switch1	PC4	ARP
	0.004	Switch1	PC5	ARP
	0.005	PC3	Switch1	ARP
Visible	0.006	Switch1	Repeater0	ARP
	0.007	Repeater0	Switch0	ARP
	0.008	Switch0	PC0	ARP
	0.008	--	PC0	ICMP
	0.009	PC0	Switch0	ICMP
	0.010	Switch0	Repeater0	ICMP

Reset Simulation ☒ Constant Delay

Play Controls



Simulation Panel

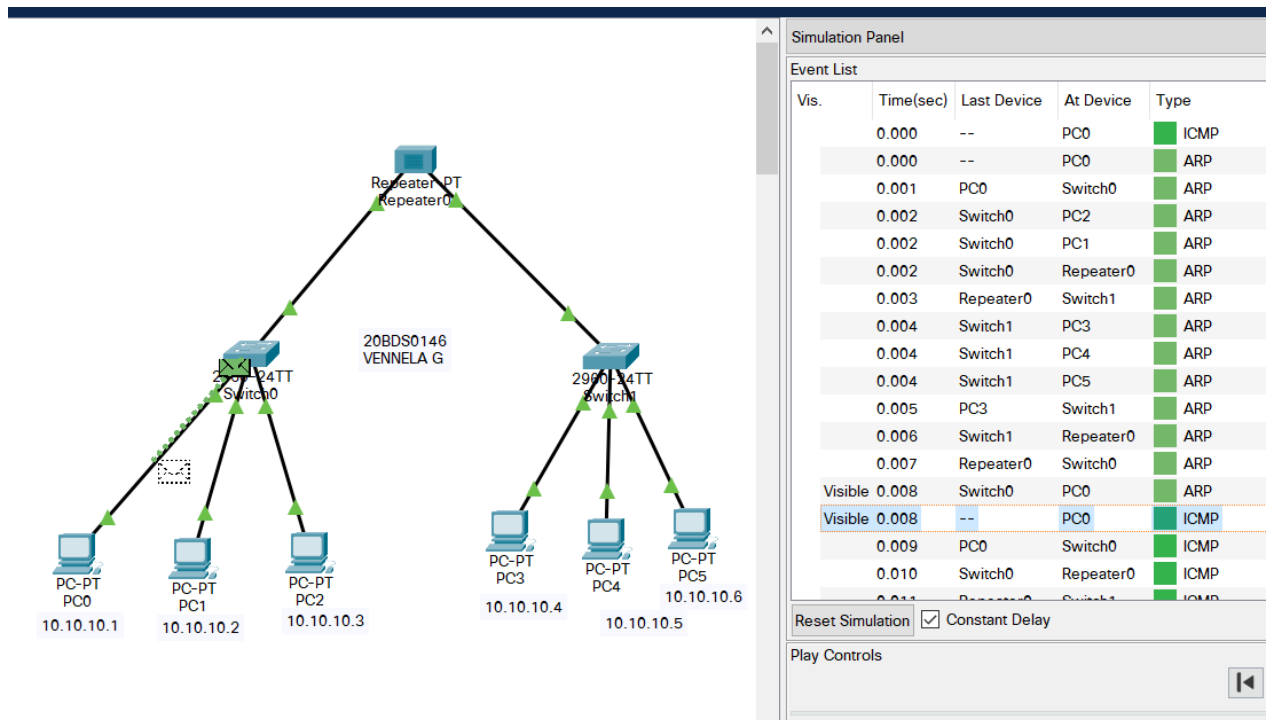
Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.000	--	PC0	ARP
	0.001	PC0	Switch0	ARP
	0.002	Switch0	PC2	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	Repeater0	ARP
	0.003	Repeater0	Switch1	ARP
	0.004	Switch1	PC3	ARP
	0.004	Switch1	PC4	ARP
	0.004	Switch1	PC5	ARP
	0.005	PC3	Switch1	ARP
	0.006	Switch1	Repeater0	ARP
Visible	0.007	Repeater0	Switch0	ARP
	0.008	Switch0	PC0	ARP
	0.008	--	PC0	ICMP
	0.009	PC0	Switch0	ICMP
	0.010	Switch0	Repeater0	ICMP

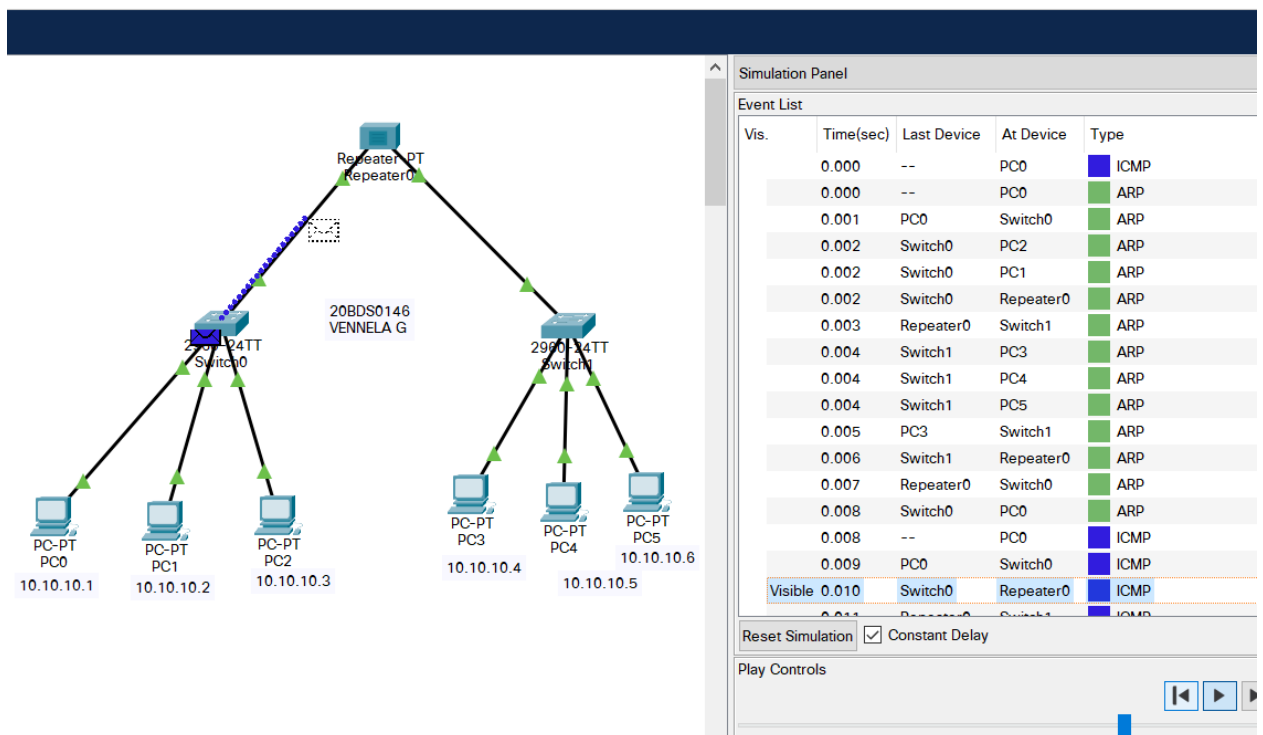
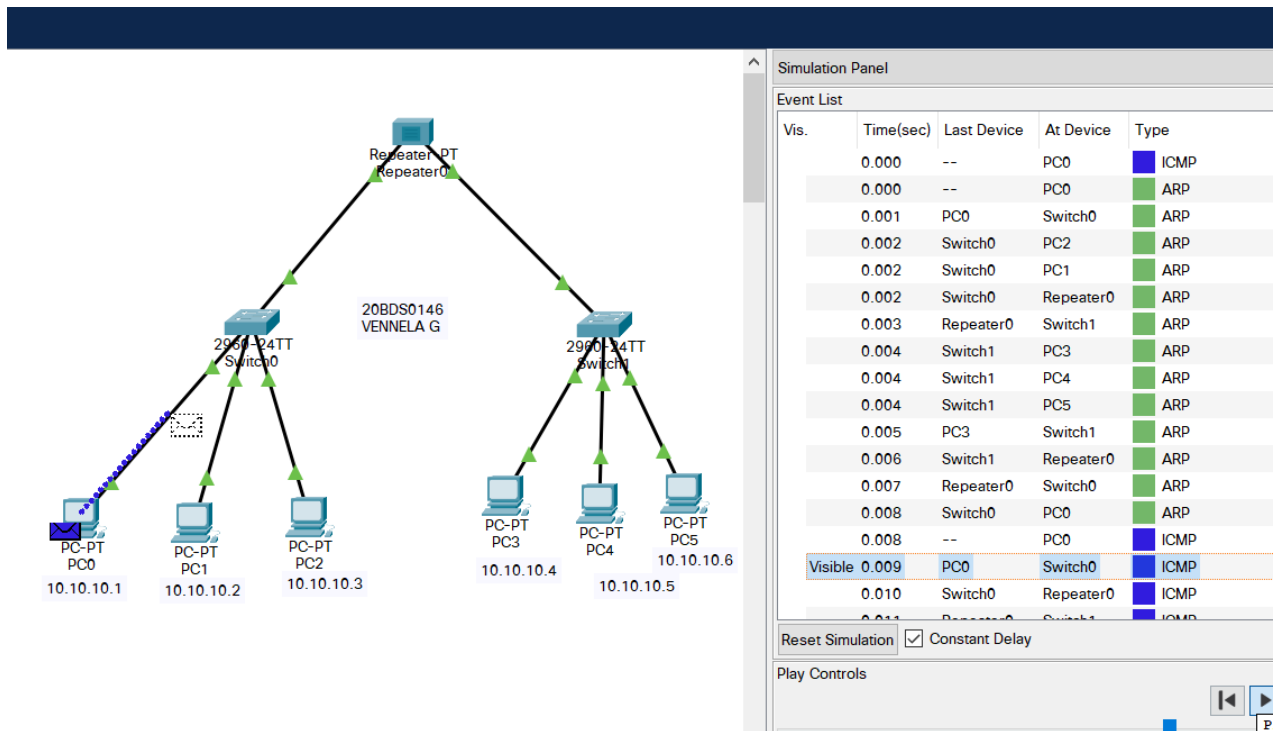
Reset Simulation ☒ Constant Delay

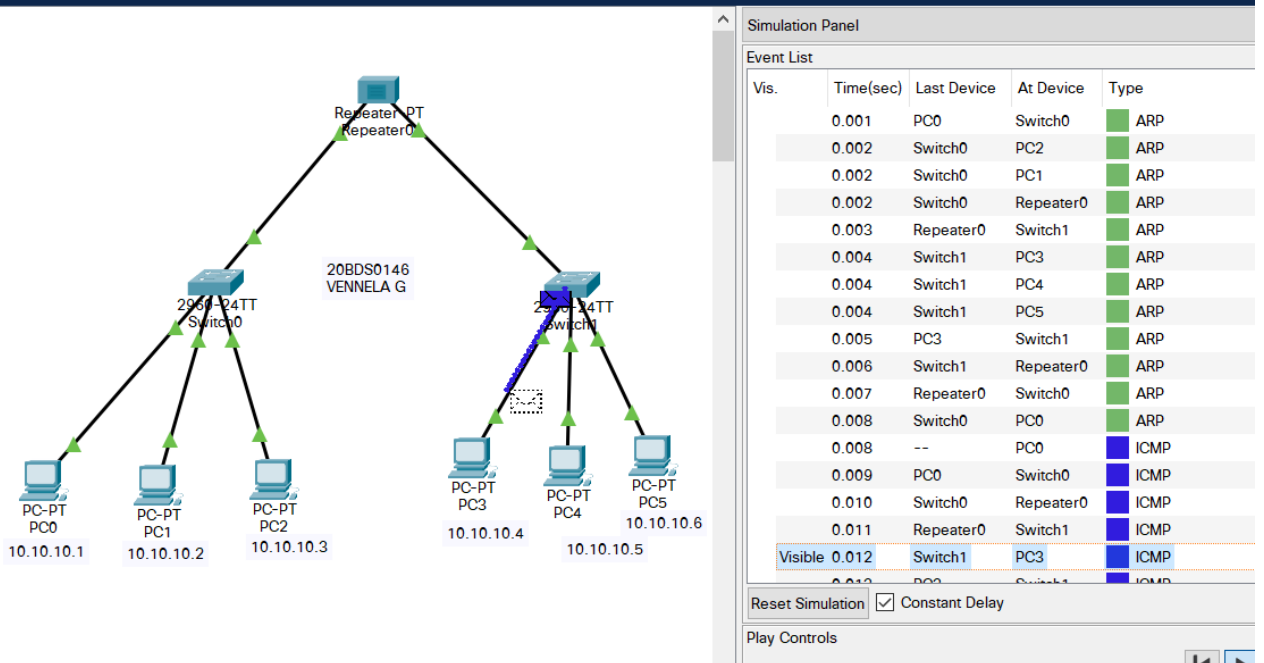
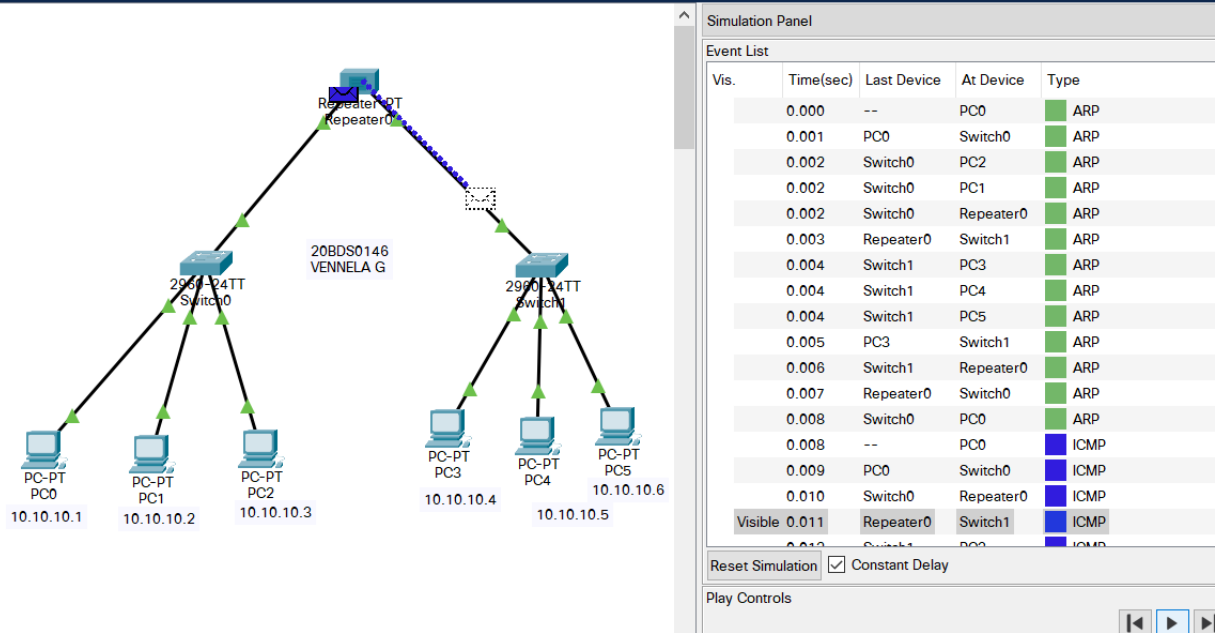
Play Controls

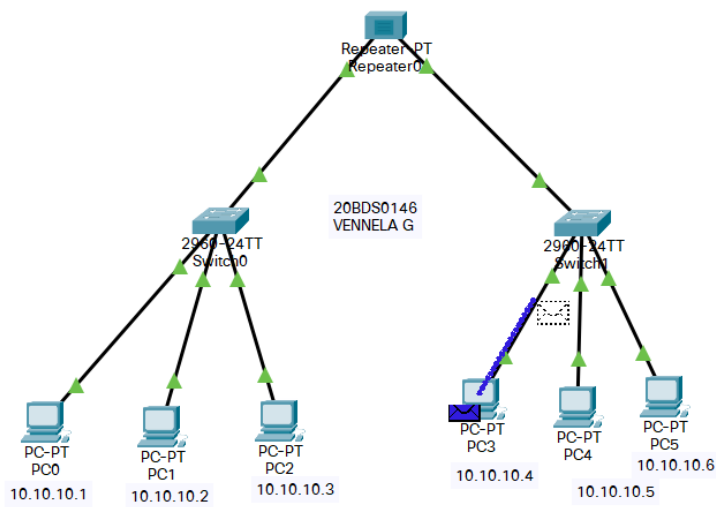
Event List Filters - Visible Events



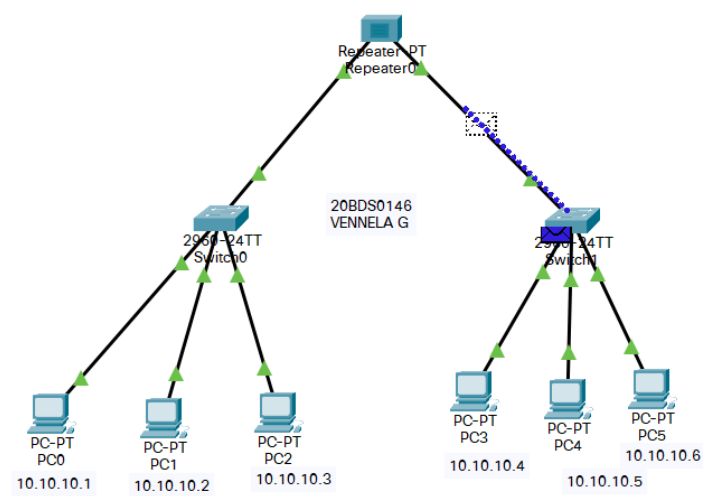
When transferring packet after learning: (it doesn't broadcast)



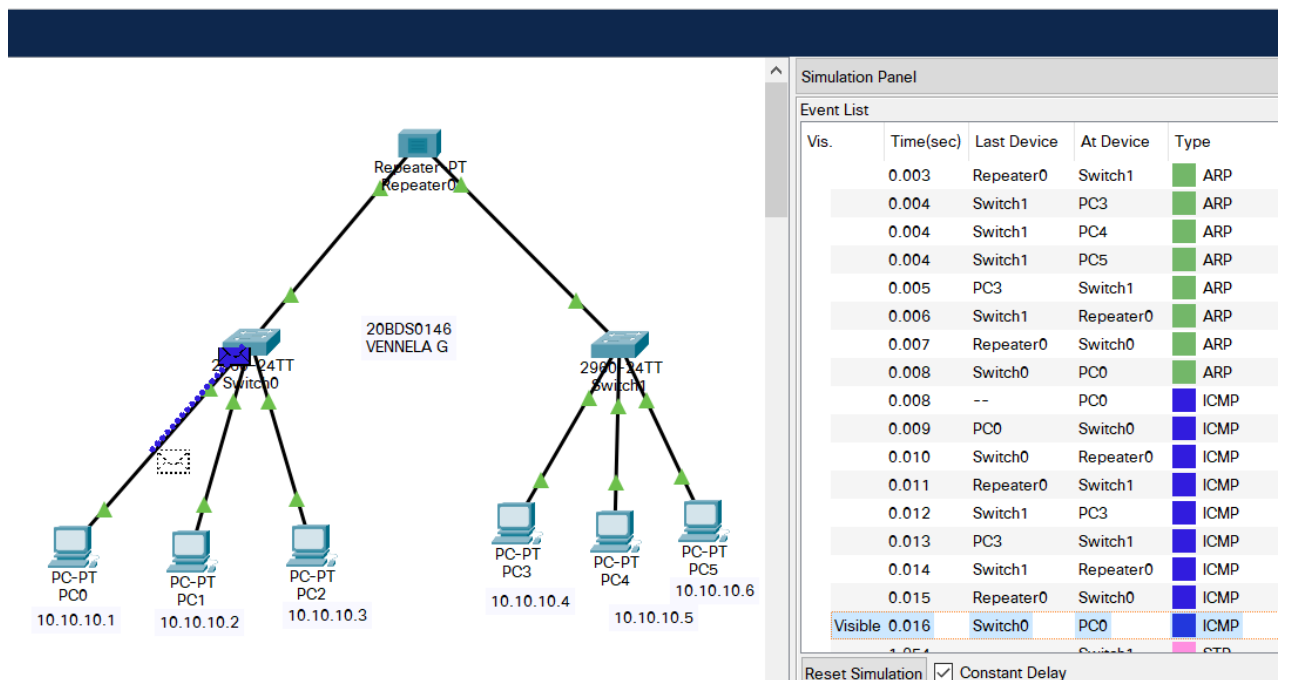
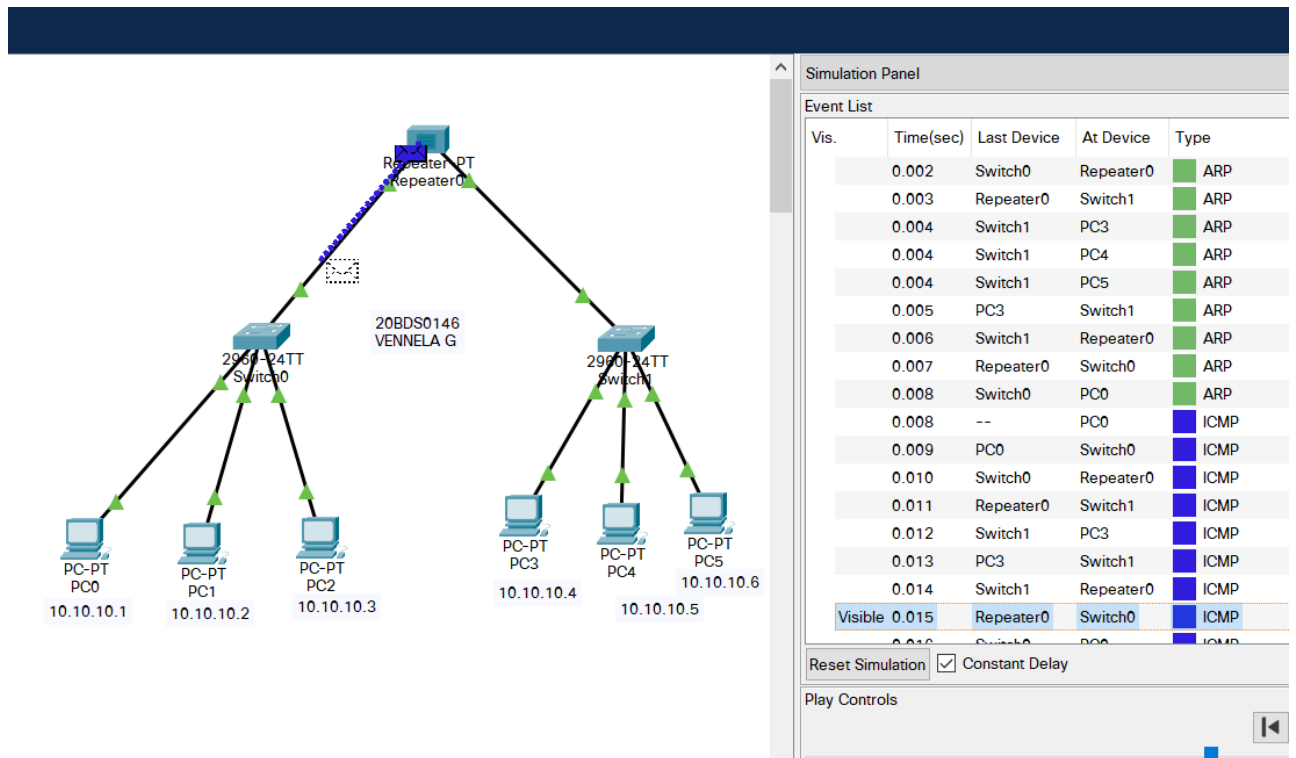


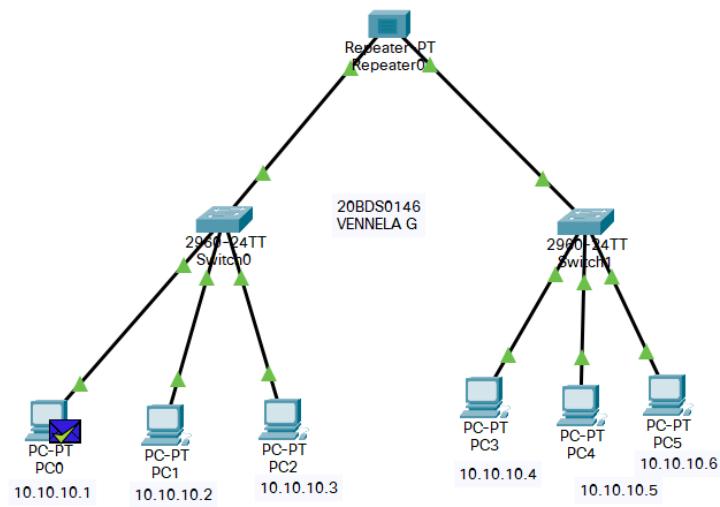


Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.002	Switch0	PC2	ARP
	0.002	Switch0	PC1	ARP
	0.002	Switch0	Repeater0	ARP
	0.003	Repeater0	Switch1	ARP
	0.004	Switch1	PC3	ARP
	0.004	Switch1	PC4	ARP
	0.004	Switch1	PC5	ARP
	0.005	PC3	Switch1	ARP
	0.006	Switch1	Repeater0	ARP
	0.007	Repeater0	Switch0	ARP
	0.008	Switch0	PC0	ARP
	0.008	--	PC0	ICMP
	0.009	PC0	Switch0	ICMP
	0.010	Switch0	Repeater0	ICMP
	0.011	Repeater0	Switch1	ICMP
	0.012	Switch1	PC3	ICMP
Visible	0.013	PC3	Switch1	ICMP
Reset Simulation <input checked="" type="checkbox"/> Constant Delay				
Play Controls				



Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.002	Switch0	PC1	ARP
	0.002	Switch0	Repeater0	ARP
	0.003	Repeater0	Switch1	ARP
	0.004	Switch1	PC3	ARP
	0.004	Switch1	PC4	ARP
	0.004	Switch1	PC5	ARP
	0.005	PC3	Switch1	ARP
	0.006	Switch1	Repeater0	ARP
	0.007	Repeater0	Switch0	ARP
	0.008	Switch0	PC0	ARP
	0.008	--	PC0	ICMP
	0.009	PC0	Switch0	ICMP
	0.010	Switch0	Repeater0	ICMP
	0.011	Repeater0	Switch1	ICMP
	0.012	Switch1	PC3	ICMP
	0.013	PC3	Switch1	ICMP
Visible	0.014	Switch1	Repeater0	ICMP
Reset Simulation <input checked="" type="checkbox"/> Constant Delay				
Play Controls				





Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.003	Repeater0	Switch1	ARP
	0.004	Switch1	PC3	ARP
	0.004	Switch1	PC4	ARP
	0.004	Switch1	PC5	ARP
	0.005	PC3	Switch1	ARP
	0.006	Switch1	Repeater0	ARP
	0.007	Repeater0	Switch0	ARP
	0.008	Switch0	PC0	ARP
	0.008	--	PC0	ICMP
	0.009	PC0	Switch0	ICMP
	0.010	Switch0	Repeater0	ICMP
	0.011	Repeater0	Switch1	ICMP
	0.012	Switch1	PC3	ICMP
	0.013	PC3	Switch1	ICMP
	0.014	Switch1	Repeater0	ICMP
	0.015	Repeater0	Switch0	ICMP
Visible	0.016	Switch0	PC0	ICMP

Reset Simulation

☒ Constant Delay

Play Controls

