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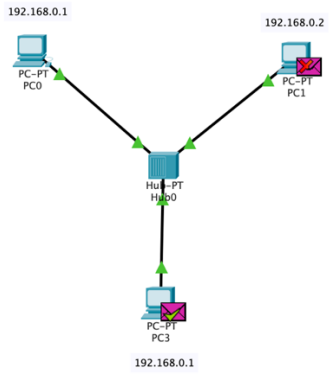
Lab Practical #04:

Installation of Network Simulator (Packet Tracer) and Implement different LAN topologies.

Practical Assignment #04:

1. Hub Connections



Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC1	ICMP
	0.000	--	PC1	ARP
	0.001	PC1	Hub0	ARP
	0.002	Hub0	PC0	ARP
	0.002	Hub0	PC2	ARP
	0.003	PC2	Hub0	ARP
	0.004	Hub0	PC0	ARP
	0.004	Hub0	PC1	ARP
	0.004	--	PC1	ICMP
	0.005	PC1	Hub0	ICMP
	0.006	Hub0	PC0	ICMP
	0.006	Hub0	PC2	ICMP
	0.007	PC2	Hub0	ICMP
Visible	0.008	Hub0	PC0	ICMP
Visible	0.008	Hub0	PC1	ICMP

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time=2ms TTL=128
Reply from 192.168.0.1: bytes=32 time=14ms TTL=128
Reply from 192.168.0.1: bytes=32 time<1ms TTL=128
Reply from 192.168.0.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 14ms, Average = 4ms

C:\>
```

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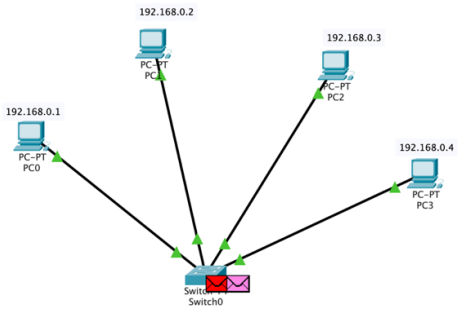
2. Switch Connections




```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Reply from 192.168.0.2: bytes=32 time=19ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 19ms, Average = 4ms

C:\>
```

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC1	ICMP
	0.001	PC1	Switch0	ICMP
	0.002	Switch0	PC3	ICMP
	0.003	PC3	Switch0	ICMP
	0.004	Switch0	PC1	ICMP
	0.017	--	Switch0	DTP
	0.018	Switch0	PC3	DTP
	0.041	--	Switch0	CDP
	0.041	--	Switch0	CDP
	0.041	--	Switch0	CDP
	0.041	--	Switch0	CDP
	0.042	Switch0	PC0	CDP
	0.042	Switch0	PC1	CDP
	0.042	Switch0	PC2	CDP
	0.042	Switch0	PC3	CDP
Visible	1.996	--	Switch0	DTP
Visible	1.996	--	Switch0	STP

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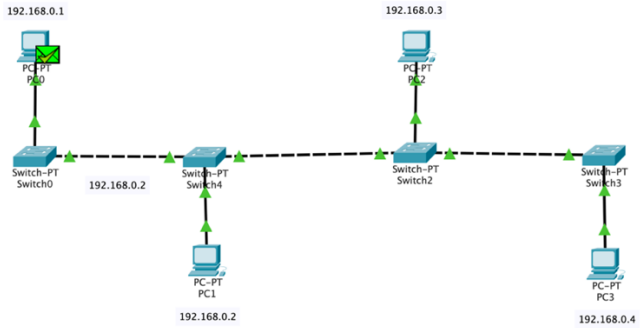
3. Implement different topologies in packet tracer.

a. Bus



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	Switch4	ARP
	0.003	Switch4	PC1	ARP
	0.003	Switch4	Switch2	ARP
	0.004	Switch2	PC2	ARP
	0.004	Switch2	Switch3	ARP
	0.005	PC2	Switch2	ARP
	0.005	Switch3	PC3	ARP
	0.006	Switch2	Switch4	ARP
	0.007	Switch4	Switch0	ARP
	0.008	Switch0	PC0	ARP
	0.008	--	PC0	ICMP
	0.009	PC0	Switch0	ICMP
	0.010	Switch0	Switch4	ICMP
	0.011	Switch4	Switch2	ICMP
	0.012	Switch2	PC2	ICMP
	0.013	PC2	Switch2	ICMP
	0.014	Switch2	Switch4	ICMP
	0.015	Switch4	Switch0	ICMP
Visible	0.016	Switch0	PC0	ICMP

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.4

Pinging 192.168.0.4 with 32 bytes of data:

Reply from 192.168.0.4: bytes=32 time=1ms TTL=128
Reply from 192.168.0.4: bytes=32 time=1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

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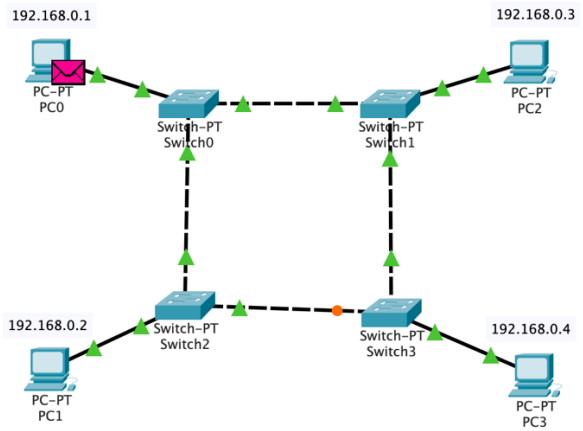
b. Ring



Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC0	ICMP
	0.001	PC0	Switch0	ICMP
	0.002	Switch0	Switch1	ICMP
	0.003	Switch1	PC2	ICMP
	0.004	PC2	Switch1	ICMP
	0.005	Switch1	Switch0	ICMP
	0.006	Switch0	PC0	ICMP
	0.169	--	Switch0	STP
	0.170	Switch0	PC0	STP
	0.170	Switch0	Switch2	STP
	0.170	Switch0	Switch1	STP
	0.171	Switch2	PC1	STP
	0.171	Switch2	Switch3	STP
	0.171	Switch1	PC2	STP
	0.171	Switch1	Switch3	STP
	0.172	Switch3	PC3	STP
	2.168	--	Switch0	STP
	2.169	Switch0	PC0	STP
	2.169	Switch0	Switch2	STP
	2.169	Switch0	Switch1	STP
	2.170	Switch2	PC1	STP
	2.170	Switch2	Switch3	STP
	2.170	Switch1	PC2	STP
	2.170	Switch1	Switch3	STP
	2.171	Switch3	PC3	STP

```
Pinging 192.168.0.3 with 32 bytes of data:

Reply from 192.168.0.3: bytes=32 time=1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

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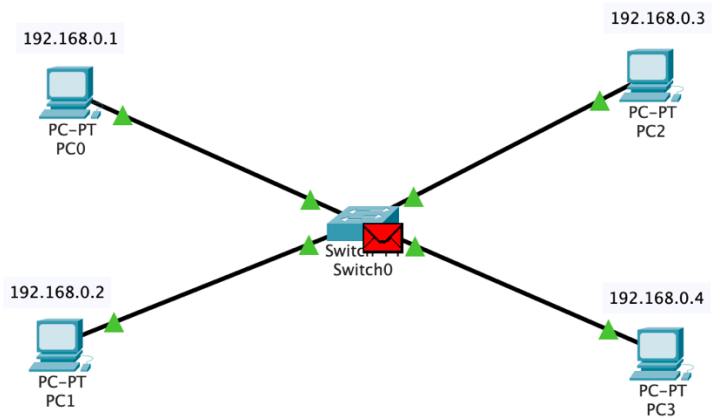
c. Star



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
	0.004	Switch0	PC0	ICMP
	0.723	--	Switch0	STP
	0.724	Switch0	PC1	STP
	0.724	Switch0	PC2	STP
	0.724	Switch0	PC3	STP
	0.724	Switch0	PC0	STP
	2.724	--	Switch0	STP
	2.725	Switch0	PC1	STP
	2.725	Switch0	PC2	STP
	2.725	Switch0	PC3	STP
	2.725	Switch0	PC0	STP
Visible	3.776	--	Switch0	DTP

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.3

Pinging 192.168.0.3 with 32 bytes of data:

Reply from 192.168.0.3: bytes=32 time=1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

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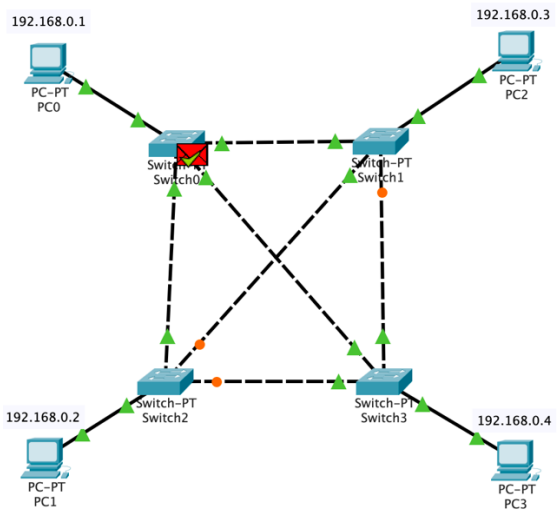
d. Mesh



Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC2	ICMP
	0.001	PC2	Switch1	ICMP
	0.002	Switch1	Switch0	ICMP
	0.003	Switch0	Switch2	ICMP
	0.004	Switch2	PC1	ICMP
	0.005	PC1	Switch2	ICMP
	0.006	Switch2	Switch0	ICMP
	0.007	Switch0	Switch1	ICMP
	0.008	Switch1	PC2	ICMP
	1.997	--	Switch0	STP
	1.998	Switch0	PC0	STP
	1.998	Switch0	Switch2	STP
	1.998	Switch0	Switch1	STP
	1.998	Switch0	Switch3	STP
	1.999	Switch2	PC1	STP
	1.999	Switch1	PC2	STP
	1.999	Switch1	Switch2	STP
	1.999	Switch3	PC3	STP

```
C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Reply from 192.168.0.2: bytes=32 time=1ms TTL=128
Reply from 192.168.0.2: bytes=32 time=17ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 17ms, Average = 4ms

C:\>
```

e. Tree

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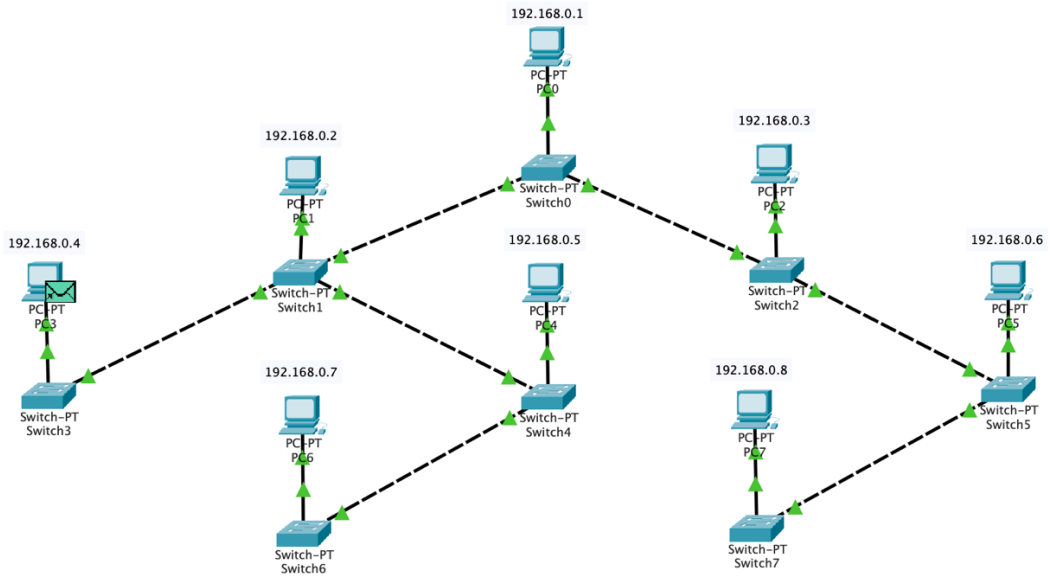

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC3	ICMP
	0.001	PC3	Switch3	ICMP
	0.002	Switch3	Switch1	ICMP
	0.003	Switch1	Switch0	ICMP
	0.004	Switch0	Switch2	ICMP
	0.005	Switch2	Switch5	ICMP
	0.006	Switch5	Switch7	ICMP
	0.007	Switch7	PC7	ICMP
	0.008	PC7	Switch7	ICMP
	0.009	Switch7	Switch5	ICMP
	0.010	Switch5	Switch2	ICMP
	0.011	Switch2	Switch0	ICMP
	0.012	Switch0	Switch1	ICMP
	0.013	Switch1	Switch3	ICMP
Visible	0.014	Switch3	PC3	ICMP

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```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.8

Pinging 192.168.0.8 with 32 bytes of data:

Reply from 192.168.0.8: bytes=32 time<1ms TTL=128
Reply from 192.168.0.8: bytes=32 time<1ms TTL=128
Reply from 192.168.0.8: bytes=32 time<1ms TTL=128
Reply from 192.168.0.8: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```