



## **Experiment (4):Network Topologies using packet tracer and ensp**

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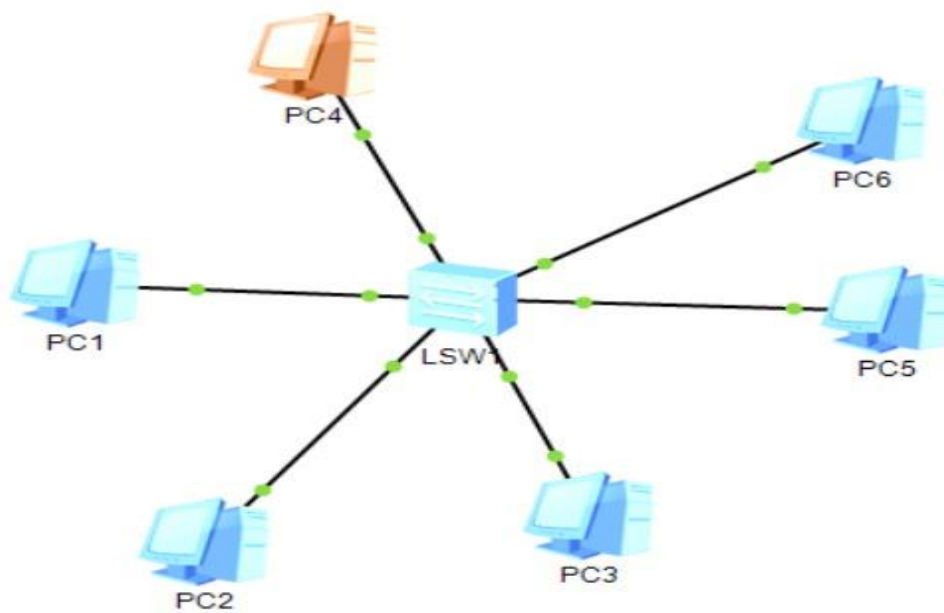
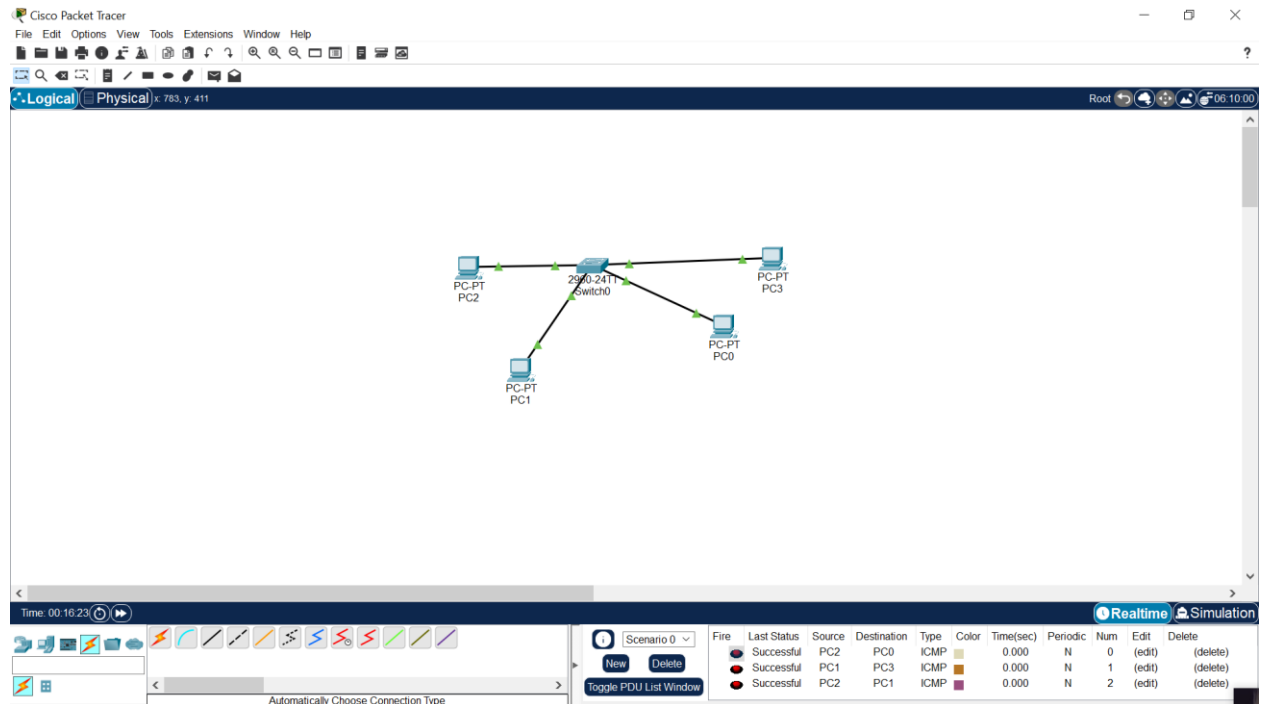
**Section Number : 2**

**Student Number in the registration statement :32**

Dr/Mohamed Abdelhamid

Eng/menna

## Star Topology



PC5

Basic Config	Command	MCPacket	UdpPacket	Console
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```
PC>ping 192.168.0.2

Ping 192.168.0.2: 32 data bytes, Press Ctrl_C to break
From 192.168.0.2: bytes=32 seq=1 ttl=128 time=46 ms
From 192.168.0.2: bytes=32 seq=2 ttl=128 time=47 ms
From 192.168.0.2: bytes=32 seq=3 ttl=128 time=46 ms
From 192.168.0.2: bytes=32 seq=4 ttl=128 time=63 ms
From 192.168.0.2: bytes=32 seq=5 ttl=128 time=47 ms

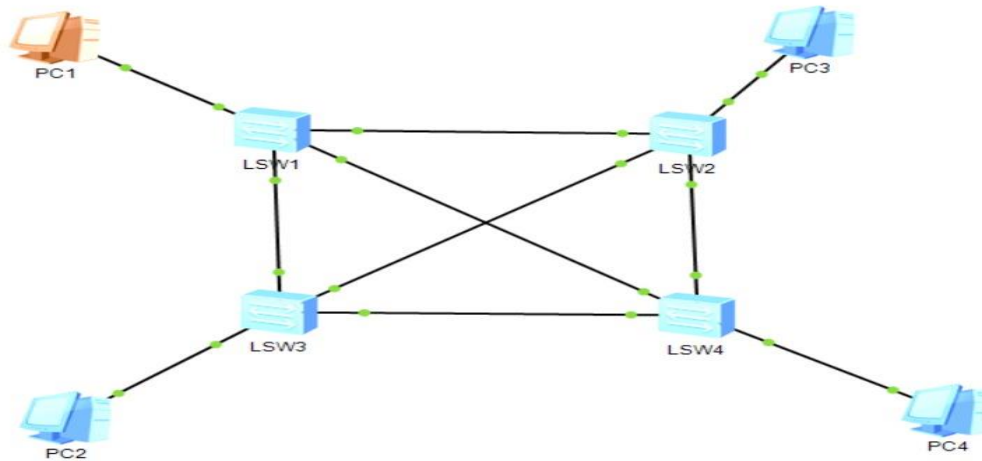
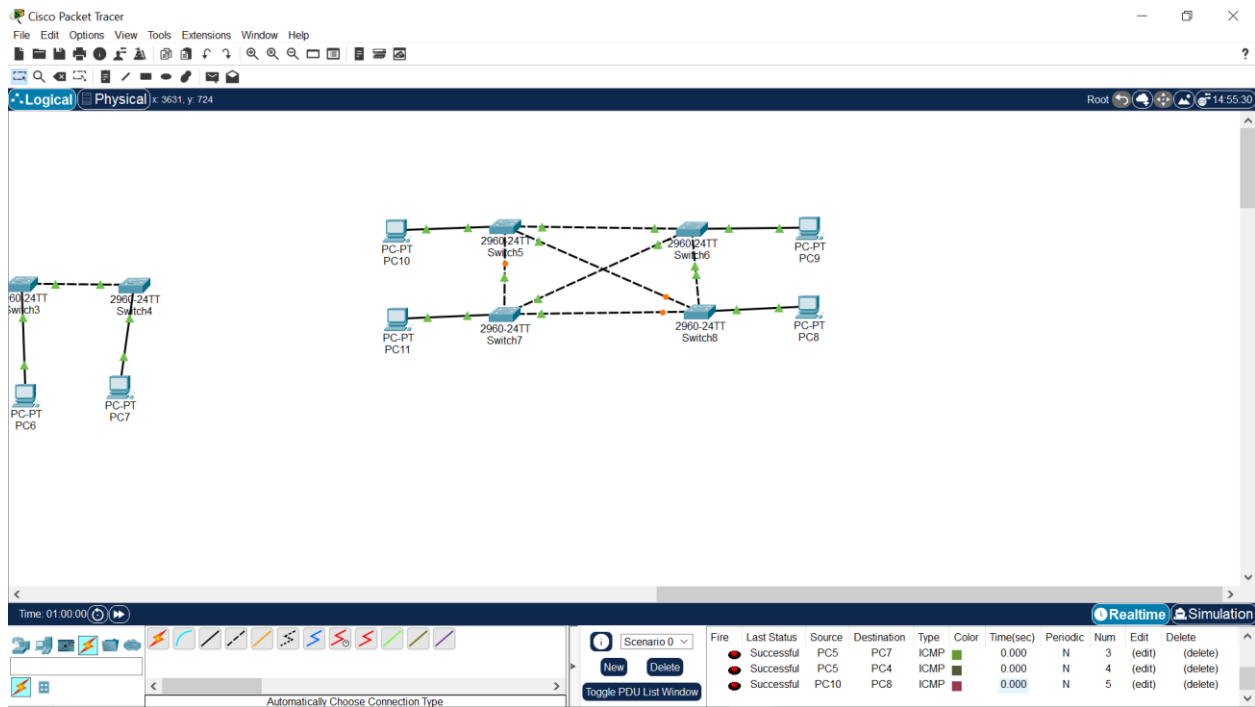
--- 192.168.0.2 ping statistics ---
  5 packet(s) transmitted
  5 packet(s) received
  0.00% packet loss
 round-trip min/avg/max = 46/49/63 ms

PC>ping 192.168.0.6

Ping 192.168.0.6: 32 data bytes, Press Ctrl_C to break
From 192.168.0.6: bytes=32 seq=1 ttl=128 time=31 ms
From 192.168.0.6: bytes=32 seq=2 ttl=128 time=63 ms
From 192.168.0.6: bytes=32 seq=3 ttl=128 time=47 ms
From 192.168.0.6: bytes=32 seq=4 ttl=128 time=47 ms
From 192.168.0.6: bytes=32 seq=5 ttl=128 time=46 ms

--- 192.168.0.6 ping statistics ---
  5 packet(s) transmitted
  5 packet(s) received
  0.00% packet loss
 round-trip min/avg/max = 31/46/63 ms
```

## Mesh Topology



```
PC1
Basic Config Command MCPacket UdpPacket Console
Welcome to use PC Simulator!

PC>ping 192.168.0.2

Ping 192.168.0.2: 32 data bytes, Press Ctrl_C to break
From 192.168.0.2: bytes=32 seq=1 ttl=128 time=94 ms
From 192.168.0.2: bytes=32 seq=2 ttl=128 time=78 ms
From 192.168.0.2: bytes=32 seq=3 ttl=128 time=78 ms
From 192.168.0.2: bytes=32 seq=4 ttl=128 time=78 ms
From 192.168.0.2: bytes=32 seq=5 ttl=128 time=93 ms

--- 192.168.0.2 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
 round-trip min/avg/max = 78/84/94 ms

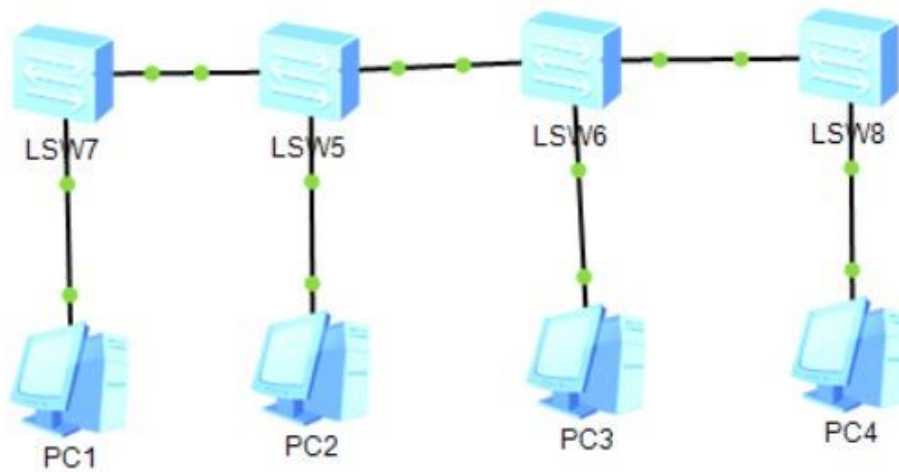
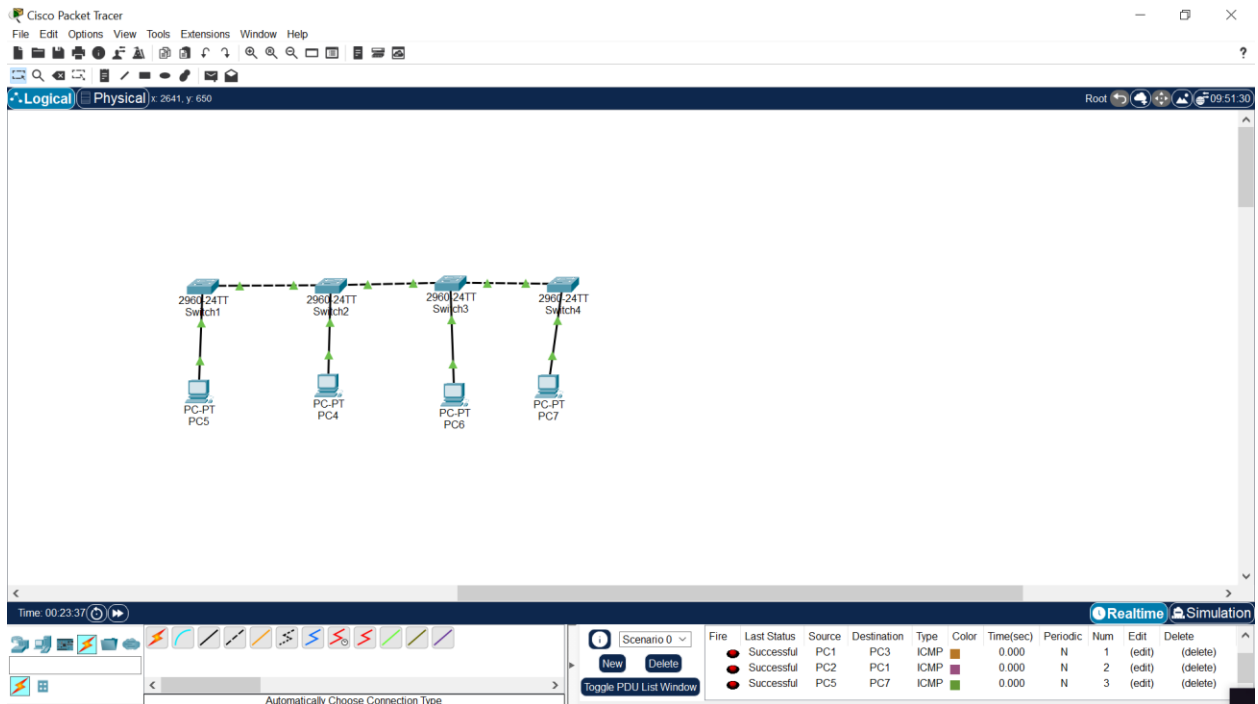
PC>ping 192.168.0.4

Ping 192.168.0.4: 32 data bytes, Press Ctrl_C to break
From 192.168.0.4: bytes=32 seq=1 ttl=128 time=78 ms
From 192.168.0.4: bytes=32 seq=2 ttl=128 time=62 ms
From 192.168.0.4: bytes=32 seq=3 ttl=128 time=63 ms
From 192.168.0.4: bytes=32 seq=4 ttl=128 time=78 ms
From 192.168.0.4: bytes=32 seq=5 ttl=128 time=63 ms

--- 192.168.0.4 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
 round-trip min/avg/max = 62/68/78 ms

PC>|
```

## Bus Topology



PC1

Basic Config Command MCPacket UdpPacket Console

```
5 packet(s) transmitted
5 packet(s) received
0.00% packet loss
round-trip min/avg/max = 94/109/125 ms

PC>ping 192.168.0.3

Ping 192.168.0.3: 32 data bytes, Press Ctrl_C to break
From 192.168.0.3: bytes=32 seq=1 ttl=128 time=109 ms
From 192.168.0.3: bytes=32 seq=2 ttl=128 time=94 ms
From 192.168.0.3: bytes=32 seq=3 ttl=128 time=93 ms
From 192.168.0.3: bytes=32 seq=4 ttl=128 time=94 ms
From 192.168.0.3: bytes=32 seq=5 ttl=128 time=94 ms

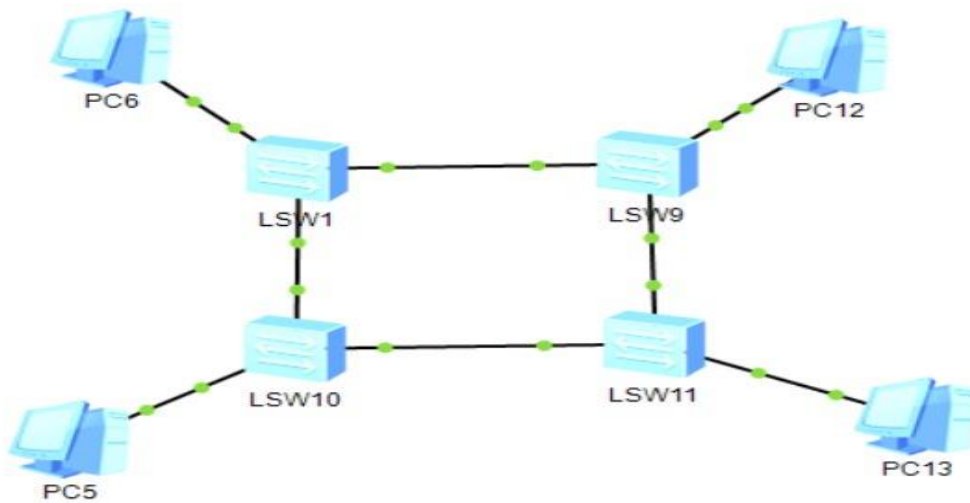
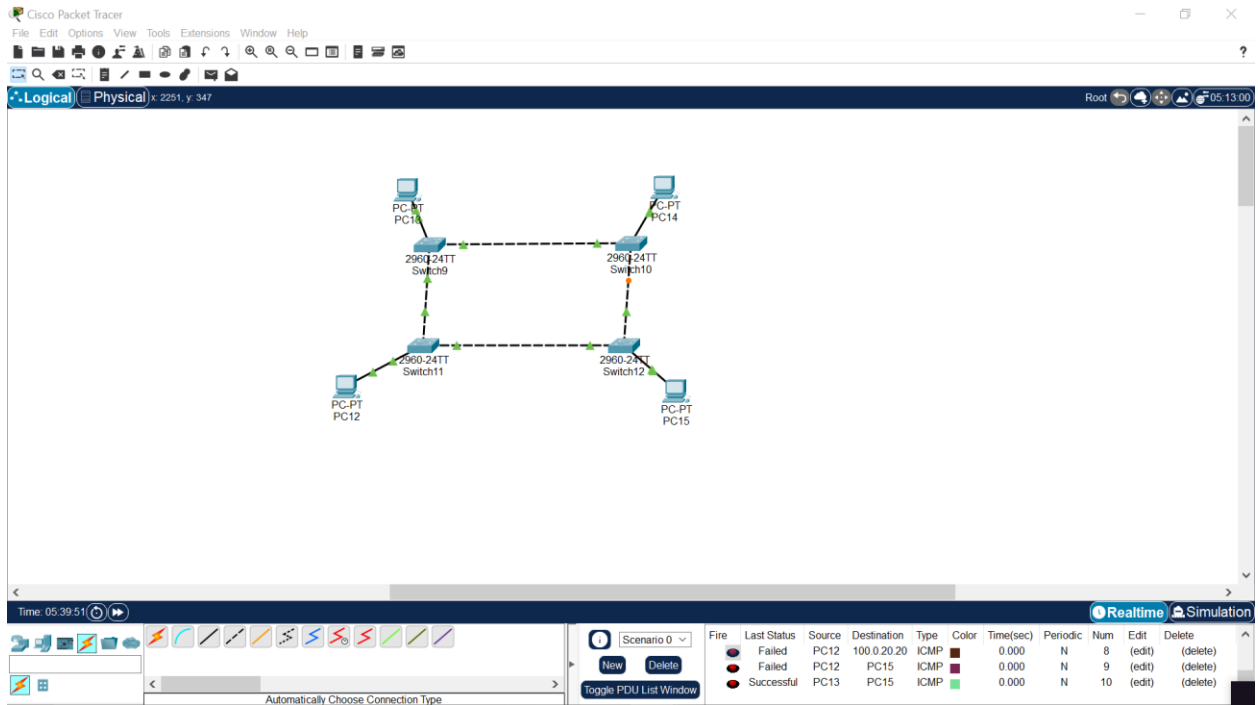
--- 192.168.0.3 ping statistics ---
5 packet(s) transmitted
5 packet(s) received
0.00% packet loss
round-trip min/avg/max = 93/96/109 ms

PC>ping 192.168.0.2

Ping 192.168.0.2: 32 data bytes, Press Ctrl_C to break
From 192.168.0.2: bytes=32 seq=1 ttl=128 time=79 ms
From 192.168.0.2: bytes=32 seq=2 ttl=128 time=78 ms
From 192.168.0.2: bytes=32 seq=3 ttl=128 time=63 ms
From 192.168.0.2: bytes=32 seq=4 ttl=128 time=63 ms
From 192.168.0.2: bytes=32 seq=5 ttl=128 time=78 ms

--- 192.168.0.2 ping statistics ---
5 packet(s) transmitted
5 packet(s) received
0.00% packet loss
round-trip min/avg/max = 63/72/79 ms
```

## Ring Topology





```
PC12
Basic Config | Command | MCPacket | UdpPacket | Console
PC>ping 192.168.0.5
Ping 192.168.0.5: 32 data bytes, Press Ctrl_C to break
From 192.168.0.5: bytes=32 seq=1 ttl=128 time=94 ms
From 192.168.0.5: bytes=32 seq=2 ttl=128 time=94 ms
From 192.168.0.5: bytes=32 seq=3 ttl=128 time=94 ms
From 192.168.0.5: bytes=32 seq=4 ttl=128 time=78 ms
From 192.168.0.5: bytes=32 seq=5 ttl=128 time=78 ms

--- 192.168.0.5 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
 round-trip min/avg/max = 78/87/94 ms

PC>ping 192.168.0.13
Ping 192.168.0.13: 32 data bytes, Press Ctrl_C to break
From 192.168.0.13: bytes=32 seq=1 ttl=128 time=63 ms
From 192.168.0.13: bytes=32 seq=2 ttl=128 time=78 ms
From 192.168.0.13: bytes=32 seq=3 ttl=128 time=62 ms
From 192.168.0.13: bytes=32 seq=4 ttl=128 time=63 ms
From 192.168.0.13: bytes=32 seq=5 ttl=128 time=78 ms

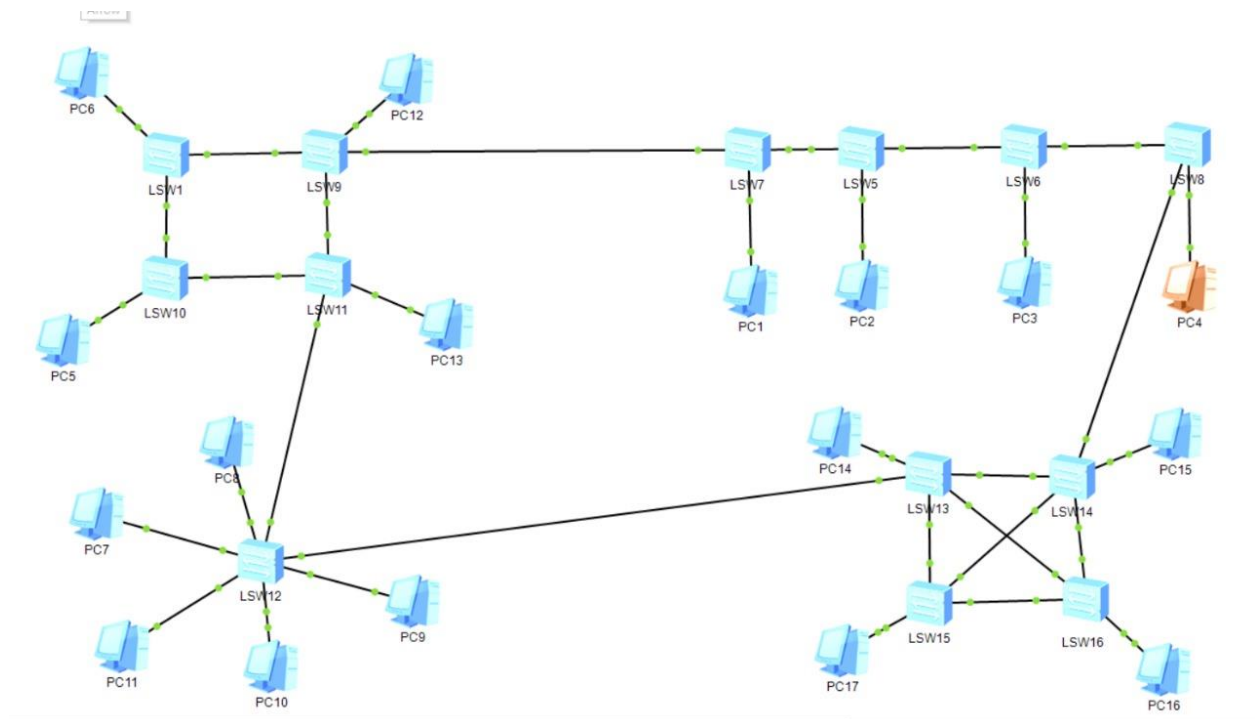
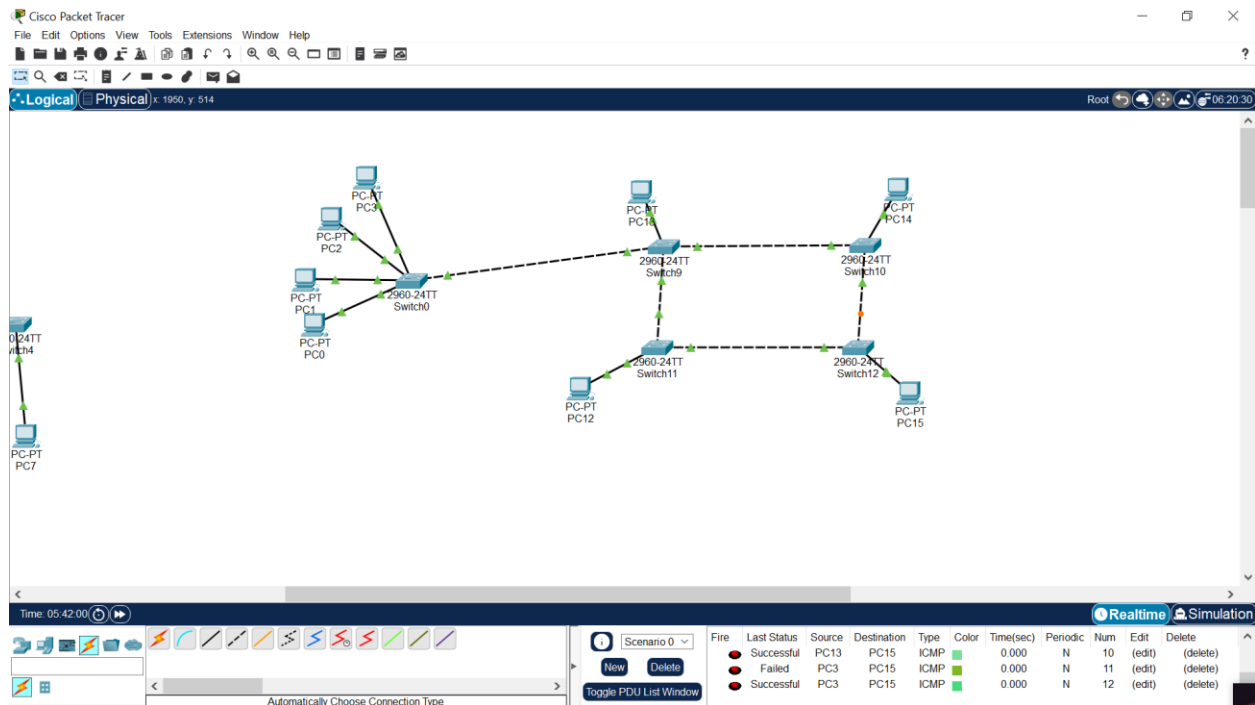
--- 192.168.0.13 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
 round-trip min/avg/max = 62/68/78 ms

PC>ping 192.168.0.6
Ping 192.168.0.6: 32 data bytes, Press Ctrl_C to break
From 192.168.0.6: bytes=32 seq=1 ttl=128 time=78 ms
From 192.168.0.6: bytes=32 seq=2 ttl=128 time=79 ms
From 192.168.0.6: bytes=32 seq=3 ttl=128 time=78 ms
From 192.168.0.6: bytes=32 seq=4 ttl=128 time=78 ms
From 192.168.0.6: bytes=32 seq=5 ttl=128 time=63 ms

--- 192.168.0.6 ping statistics ---
 5 packet(s) transmitted
```

## Hybrid Topology

### Ring and star



```
PC4
Basic Config Command MCPacket UdpPacket Console
Ping 192.168.0.10: 32 data bytes, Press Ctrl_C to break
From 192.168.0.10: bytes=32 seq=1 ttl=128 time=109 ms
From 192.168.0.10: bytes=32 seq=2 ttl=128 time=109 ms
From 192.168.0.10: bytes=32 seq=3 ttl=128 time=94 ms
From 192.168.0.10: bytes=32 seq=4 ttl=128 time=110 ms
From 192.168.0.10: bytes=32 seq=5 ttl=128 time=156 ms

--- 192.168.0.10 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
 round-trip min/avg/max = 94/115/156 ms

PC>ping 192.168.0.16

Ping 192.168.0.16: 32 data bytes, Press Ctrl_C to break
From 192.168.0.16: bytes=32 seq=1 ttl=128 time=109 ms
From 192.168.0.16: bytes=32 seq=2 ttl=128 time=78 ms
From 192.168.0.16: bytes=32 seq=3 ttl=128 time=110 ms
From 192.168.0.16: bytes=32 seq=4 ttl=128 time=94 ms
From 192.168.0.16: bytes=32 seq=5 ttl=128 time=78 ms

--- 192.168.0.16 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
 round-trip min/avg/max = 78/93/110 ms

PC>ping 192.168.0.6

Ping 192.168.0.6: 32 data bytes, Press Ctrl_C to break
From 192.168.0.6: bytes=32 seq=1 ttl=128 time=141 ms
From 192.168.0.6: bytes=32 seq=2 ttl=128 time=187 ms
From 192.168.0.6: bytes=32 seq=3 ttl=128 time=140 ms
From 192.168.0.6: bytes=32 seq=4 ttl=128 time=203 ms
From 192.168.0.6: bytes=32 seq=5 ttl=128 time=172 ms

--- 192.168.0.6 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
 round-trip min/avg/max = 140/168/203 ms

PC>
```

```
PC9
Basic Config Command MCPacket UdpPacket Console
From 192.168.0.13: bytes=32 seq=1 ttl=128 time=79 ms
From 192.168.0.13: bytes=32 seq=2 ttl=128 time=63 ms
From 192.168.0.13: bytes=32 seq=3 ttl=128 time=78 ms
From 192.168.0.13: bytes=32 seq=4 ttl=128 time=62 ms
From 192.168.0.13: bytes=32 seq=5 ttl=128 time=47 ms

--- 192.168.0.13 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
 round-trip min/avg/max = 47/65/79 ms

PC>ping 192.168.0.1

Ping 192.168.0.1: 32 data bytes, Press Ctrl_C to break
From 192.168.0.1: bytes=32 seq=1 ttl=128 time=187 ms
From 192.168.0.1: bytes=32 seq=2 ttl=128 time=140 ms
From 192.168.0.1: bytes=32 seq=3 ttl=128 time=187 ms
From 192.168.0.1: bytes=32 seq=4 ttl=128 time=203 ms
From 192.168.0.1: bytes=32 seq=5 ttl=128 time=203 ms

--- 192.168.0.1 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
 round-trip min/avg/max = 140/184/203 ms

PC>ping 192.168.0.17

Ping 192.168.0.17: 32 data bytes, Press Ctrl_C to break
From 192.168.0.17: bytes=32 seq=1 ttl=128 time=110 ms
From 192.168.0.17: bytes=32 seq=2 ttl=128 time=156 ms
From 192.168.0.17: bytes=32 seq=3 ttl=128 time=109 ms
From 192.168.0.17: bytes=32 seq=4 ttl=128 time=125 ms
From 192.168.0.17: bytes=32 seq=5 ttl=128 time=141 ms

--- 192.168.0.17 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
 round-trip min/avg/max = 109/128/156 ms
```

## Point-to-point

