

# CNE301 – Network I

## Back2back network & Peer2peer star network using packet tracer

#	Student ID	Student Name	Grade (10)
1			

## Experiment (1.1)

### Back2back Network

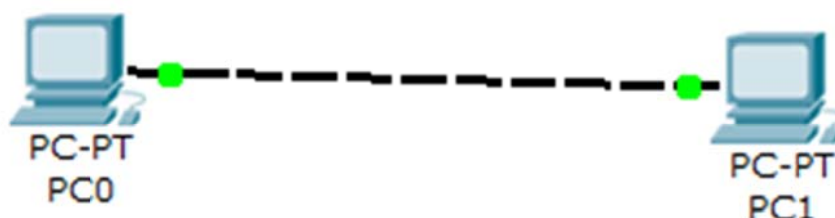
#### Objective

Understand the concept of cross over cable  
Configuring a simple back2back network

#### Equipment needed

- Cross over cable
- 2 PCs run windows OS

#### Procedure

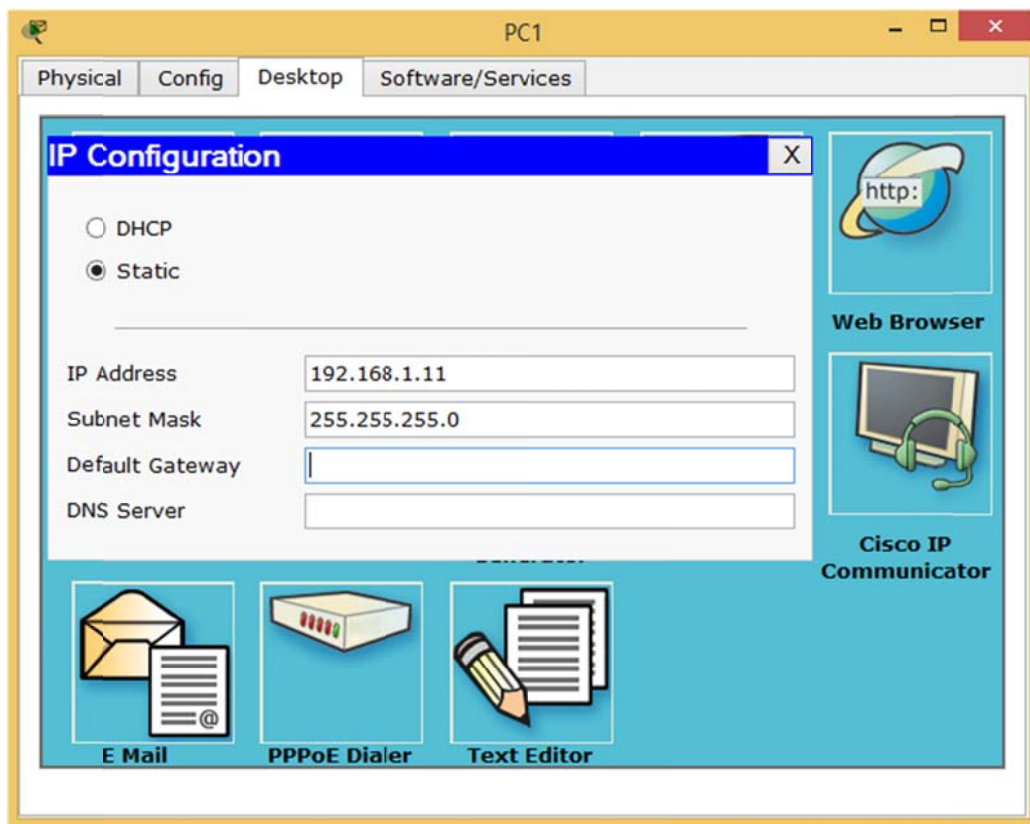
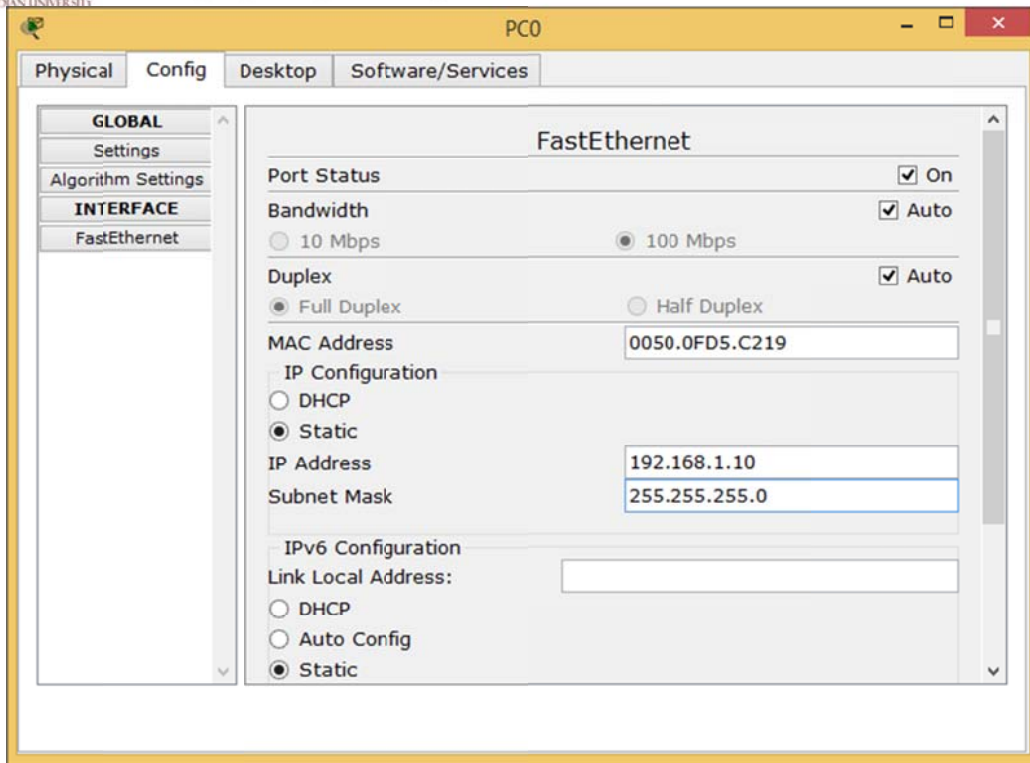


1. Open packet tracer SW
2. Build a network shown in above figure
3. Configure PC0 as follow

item	Configuration
IP	192.168.1.10
Mask	255.255.255.0
Bandwidth	Auto
duplex	Auto

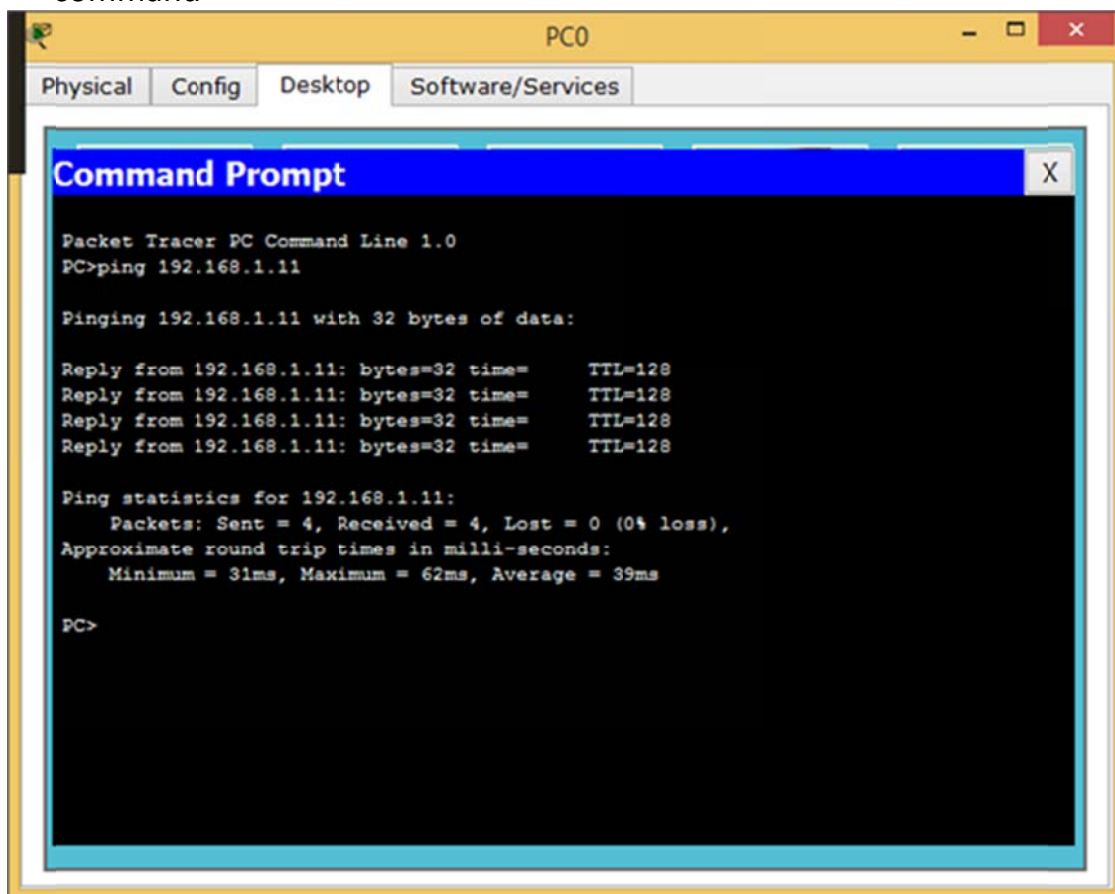
4. Configure PC1 as follow

item	Configuration
IP	192.168.1.11
Mask	255.255.255.0
Bandwidth	Auto
duplex	Auto



## Testing and results

1. Open command prompt of PC0, test connectivity to PC1 using ping command



```

Packet Tracer PC Command Line 1.0
PC>ping 192.168.1.11

Pinging 192.168.1.11 with 32 bytes of data:

Reply from 192.168.1.11: bytes=32 time=    TTL=128
Reply from 192.168.1.11: bytes=32 time=    TTL=128
Reply from 192.168.1.11: bytes=32 time=    TTL=128
Reply from 192.168.1.11: bytes=32 time=    TTL=128

Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 31ms, Maximum = 62ms, Average = 39ms

PC>
  
```

2. Record the average round trip time in In the following table.
3. Open command prompt of PC1, test connectivity to PC2 using ping command
4. Record the average round trip time in In the following table.

Src to des ping	Min RTT	Max RTT	Average RT
PC0→PC1			
PC1→PC2			

## Experiment (1.2)

### Peer2peer star Network using hub

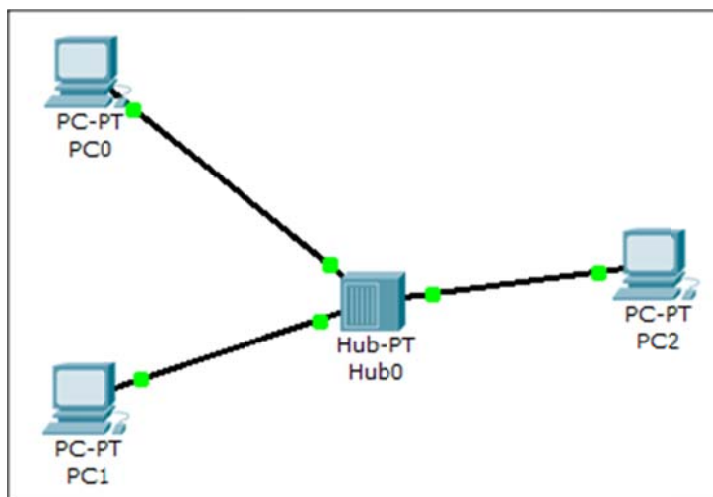
#### Objective

Understand the concept of straight through cable and switch connectivity  
Configuring a simple peer2peer star network

#### Equipment needed

- Straight through cables
- hub
- 3 PCs run windows OS

#### Procedure



1. Open packet tracer SW
2. Build a network shown in above figure
3. Configure PC0 as follow

item	Configuration
IP	192.168.1.10
Mask	255.255.255.0
Bandwidth	Auto
duplex	Auto

4. Configure PC1 as follow

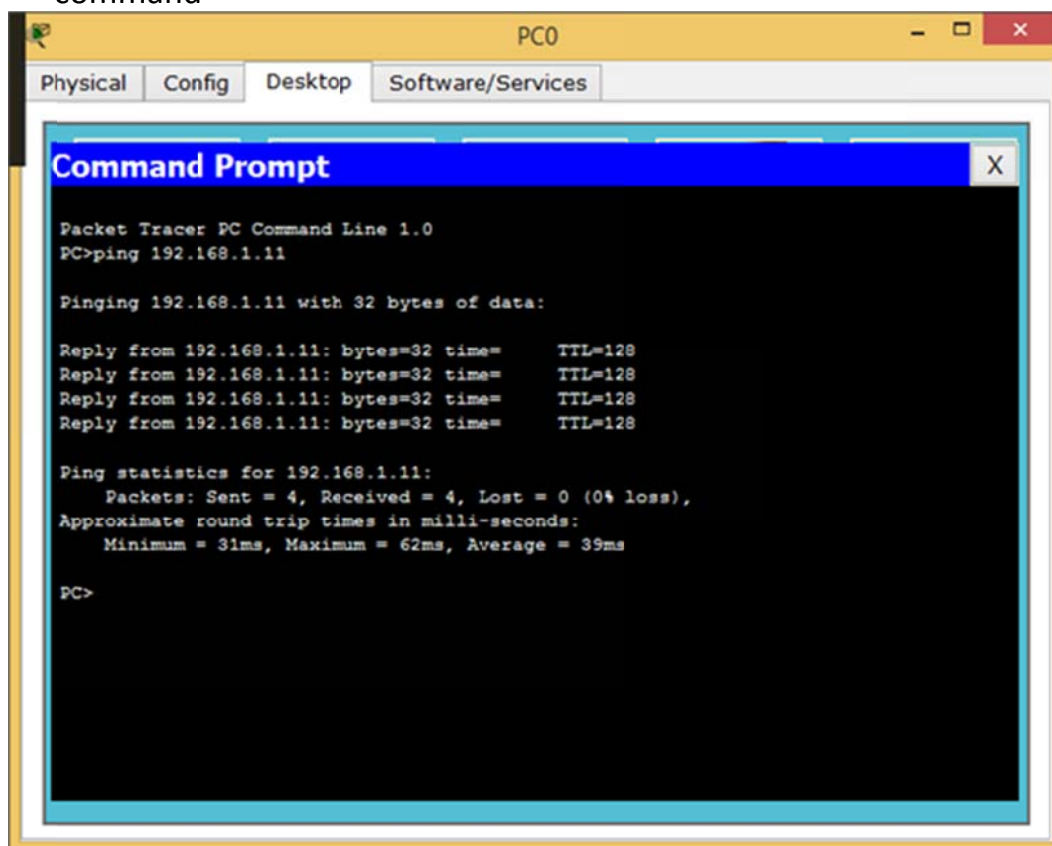
item	Configuration
IP	192.168.1.11
Mask	255.255.255.0
Bandwidth	Auto
duplex	Auto

5. Configure PC2 as follow

item	Configuration
IP	192.168.1.12
Mask	255.255.255.0
Bandwidth	Auto
duplex	Auto

## Testing and results

1. Open command prompt of PC0, test connectivity to PC1 using ping command



```

PC0
Physical Config Desktop Software/Services
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 192.168.1.11

Pinging 192.168.1.11 with 32 bytes of data:

Reply from 192.168.1.11: bytes=32 time=    TTL=128
Reply from 192.168.1.11: bytes=32 time=    TTL=128
Reply from 192.168.1.11: bytes=32 time=    TTL=128
Reply from 192.168.1.11: bytes=32 time=    TTL=128

Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 31ms, Maximum = 62ms, Average = 39ms

PC>

```

2. Record the average round trip time in In the following table.
3. Open command prompt of PC1, text connectivity to PC2 using ping command
4. Record the average round trip time in In the following table.

Src to des ping	Min RTT	Max RTT	Average RT
PC0→PC1			
PC0→PC2			

## Experiment (1.3)

### Peer2peer star Network using switch

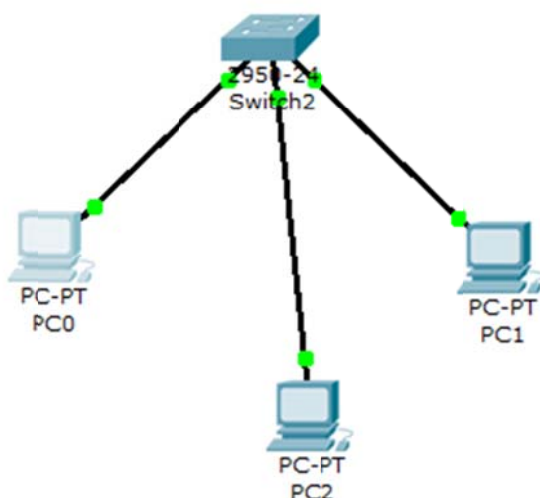
#### Objective

Understand the concept of straight through cable and switch connectivity  
Configuring a simple peer2peer star network

#### Equipment needed

- Straight through cables
- switch
- 3 PCs run windows OS

#### Procedure



1. Open packet tracer SW
2. Build a network shown in above figure
3. Configure PC0 as follow

item	Configuration
IP	192.168.1.10
Mask	255.255.255.0
Bandwidth	Auto
duplex	Auto



4. Configure PC1 as follow

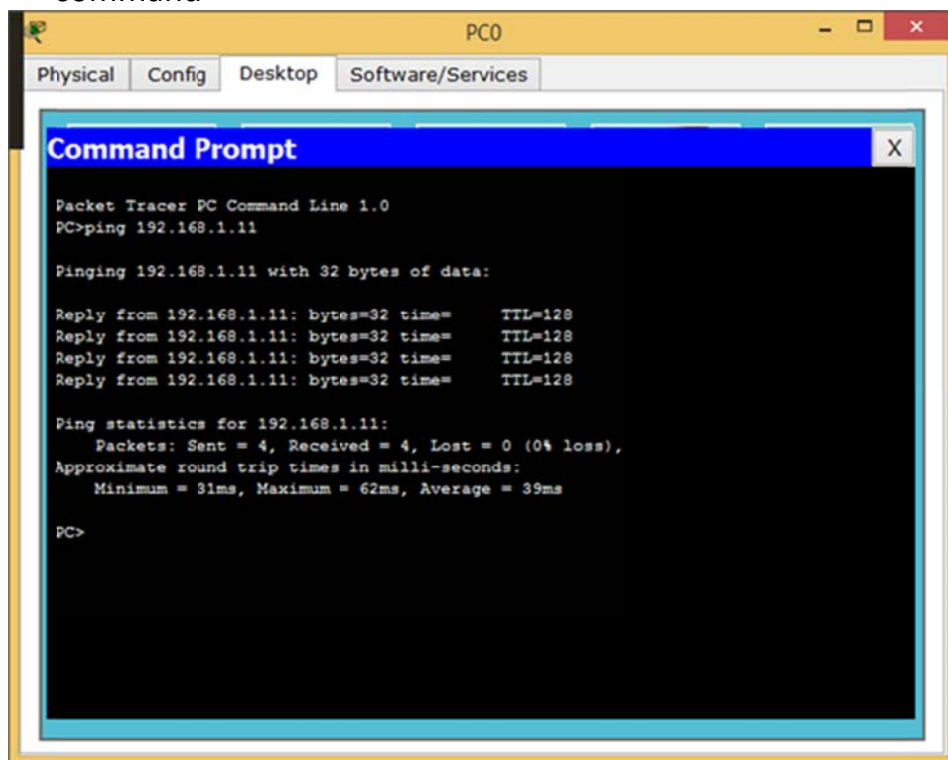
item	Configuration
IP	192.168.1.11
Mask	255.255.255.0
Bandwidth	Auto
duplex	Auto

5. Configure PC2 as follow

item	Configuration
IP	192.168.1.12
Mask	255.255.255.0
Bandwidth	Auto
duplex	Auto

## Testing and results

5. Open command prompt of PC0, test connectivity to PC1 using ping command



```

PC0
Physical Config Desktop Software/Services
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 192.168.1.11

Pinging 192.168.1.11 with 32 bytes of data:

Reply from 192.168.1.11: bytes=32 time=    TTL=128
Reply from 192.168.1.11: bytes=32 time=    TTL=128
Reply from 192.168.1.11: bytes=32 time=    TTL=128
Reply from 192.168.1.11: bytes=32 time=    TTL=128

Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 31ms, Maximum = 62ms, Average = 39ms

PC>

```

6. Record the average round trip time in In the following table.
7. Open command prompt of PC1, text connectivity to PC2 using ping command
8. Record the average round trip time in In the following table.

Src to des ping	Min RTT	Max RTT	Average RT
PC0→PC1			
PC0→PC2			

**Conclusions:**

1. Compare the round trip time for back2 back to hub based star network, and to a switch based star network (which is higher, which is lower)?

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2. Explain you answer of question 1.

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3. Is the device that causes the lowest delay time is the most efficient? And why?

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