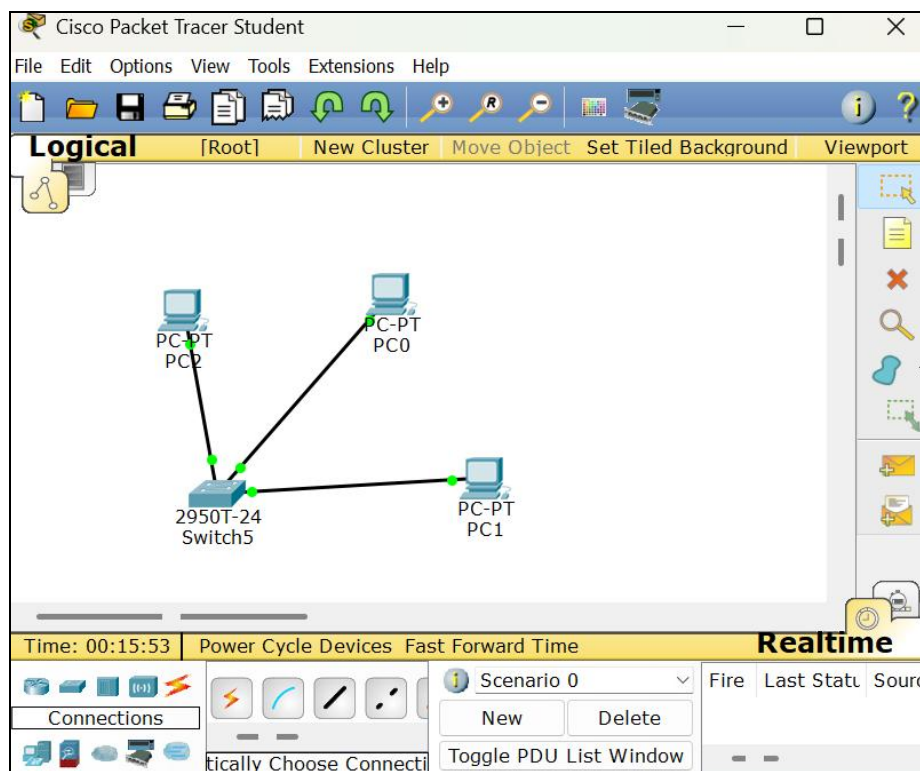
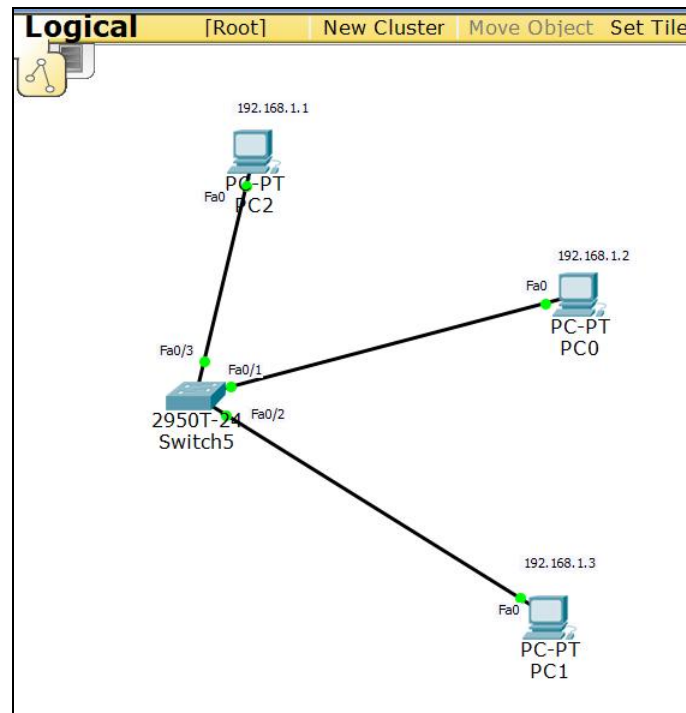


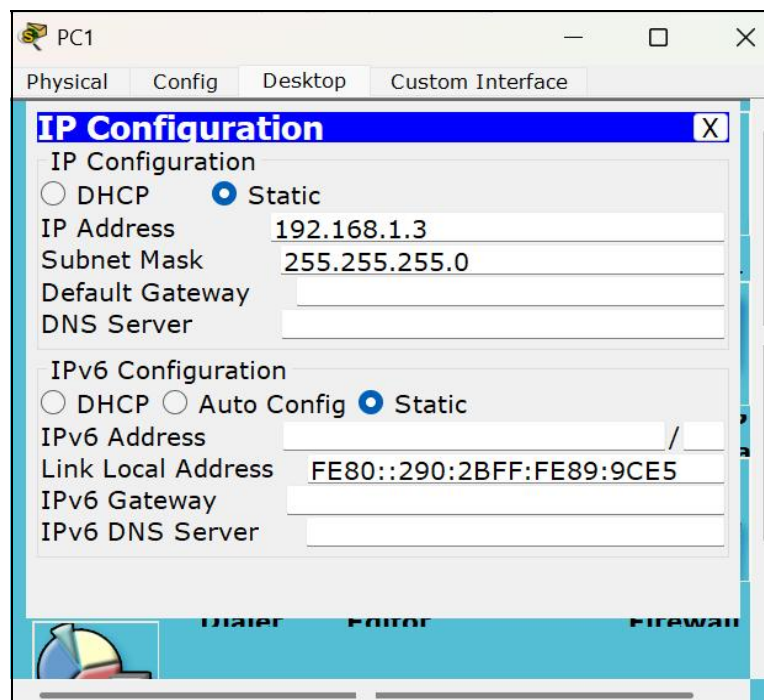
# CONNECTING 3PCs TOGETHER WITH A SWITCH

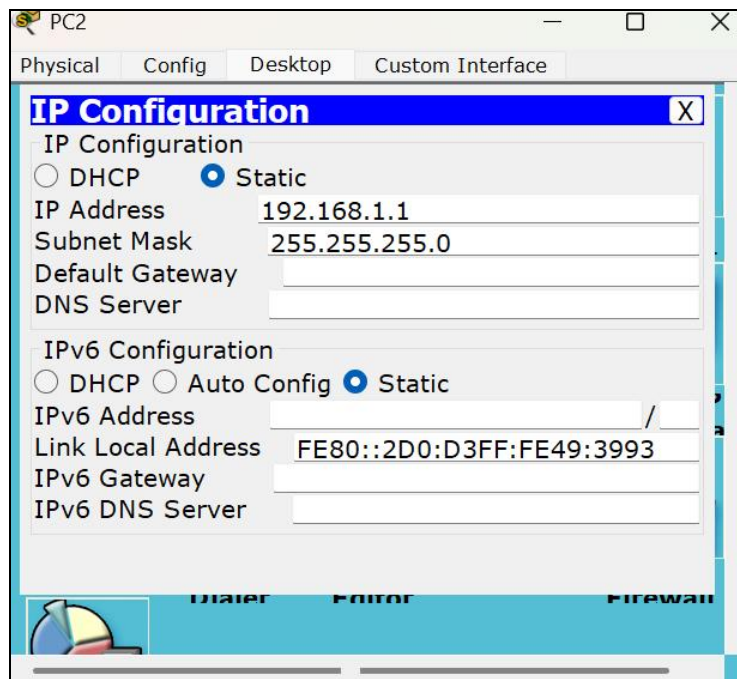
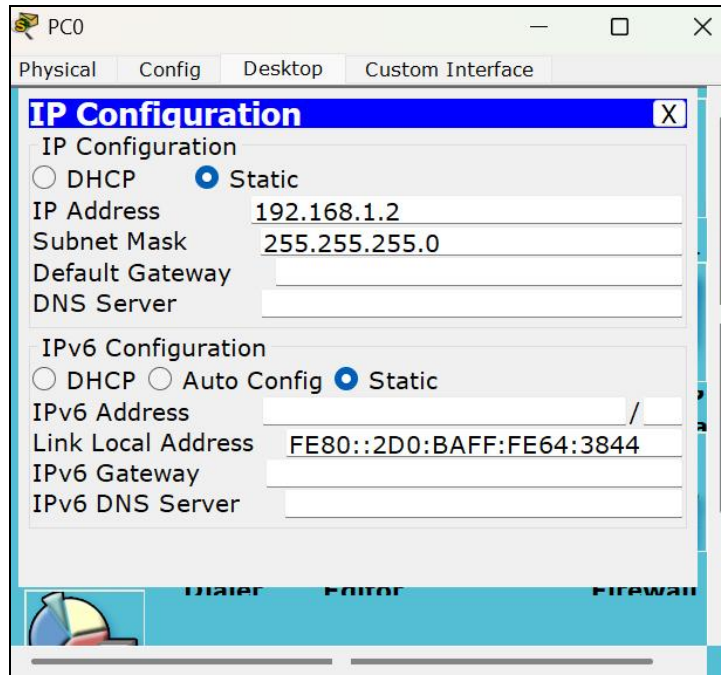
- Take three PCs and assign the following IPs:  
PC0: 192.168.1.2 with subnet mask 255.255.255.0  
PC1: 192.168.1.0 with subnet 255.255.255.0  
PC2: 192.168.1.1 with subnet 255.255.255.0
- Use the ping command to check the connectivity between the three systems.
- Did PC1 reply to PC2?
- Did PC1 reply to PC3?



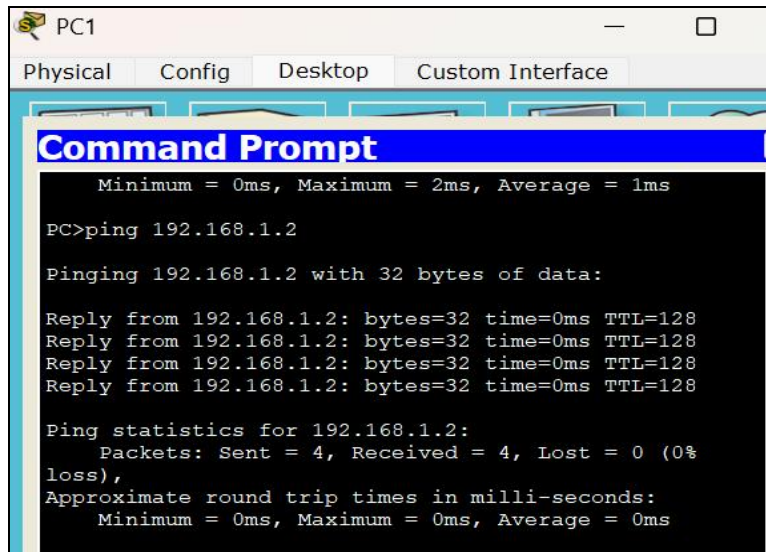


Configuring PC0, PC1, PC2 -ip addresses





## Configuring PC1's CLI and ping other two PCs



The screenshot shows a window titled 'PC1' with tabs for 'Physical', 'Config', 'Desktop', and 'Custom Interface'. The 'Config' tab is active, displaying a 'Command Prompt' window. The prompt shows the command 'PC>ping 192.168.1.2' and its output, which includes four successful replies and statistics showing 0% loss.

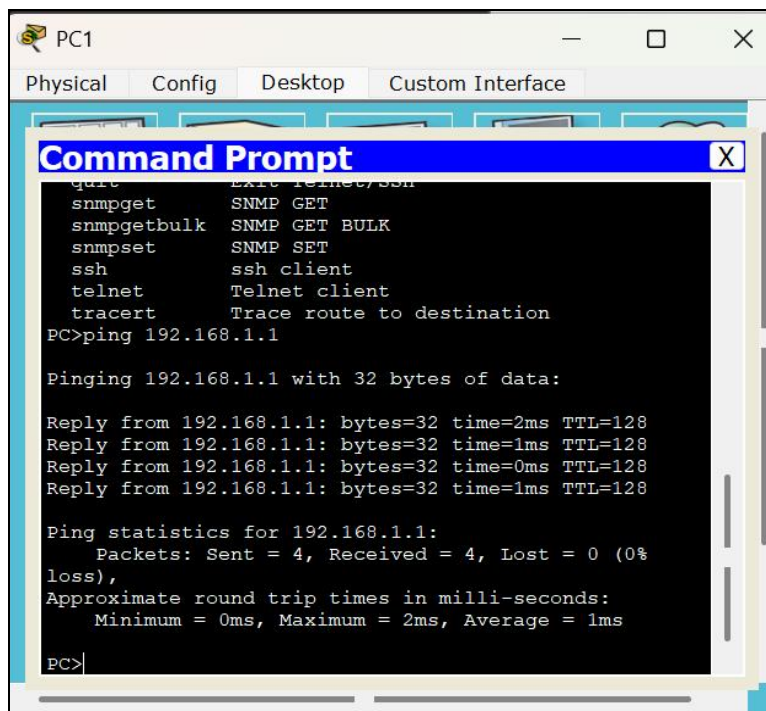
```
Minimum = 0ms, Maximum = 2ms, Average = 1ms

PC>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=0ms TTL=128
Reply from 192.168.1.2: bytes=32 time=0ms TTL=128
Reply from 192.168.1.2: bytes=32 time=0ms TTL=128
Reply from 192.168.1.2: bytes=32 time=0ms TTL=128

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



The screenshot shows a window titled 'PC1' with tabs for 'Physical', 'Config', 'Desktop', and 'Custom Interface'. The 'Config' tab is active, displaying a 'Command Prompt' window. The prompt shows the command 'PC>ping 192.168.1.1' and its output, which includes four successful replies and statistics showing 0% loss.

```
quit          Exit telnetd/ssh
snmpget       SNMP GET
snmpgetbulk   SNMP GET BULK
snmpset       SNMP SET
ssh           ssh client
telnet        Telnet client
tracert       Trace route to destination

PC>ping 192.168.1.1

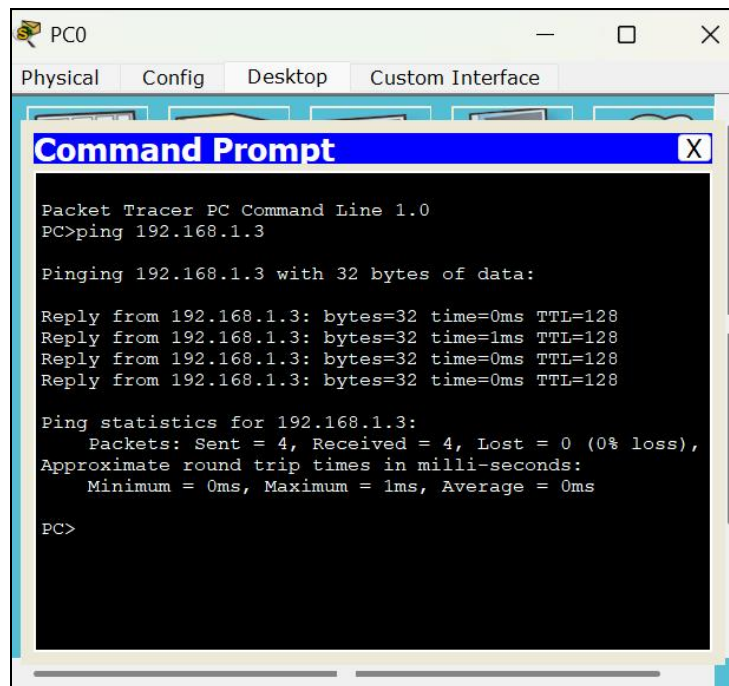
Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=2ms TTL=128
Reply from 192.168.1.1: bytes=32 time=1ms TTL=128
Reply from 192.168.1.1: bytes=32 time=0ms 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 = 2ms, Average = 1ms

PC>
```

## Configuring PC0's CLI and ping other two PCs



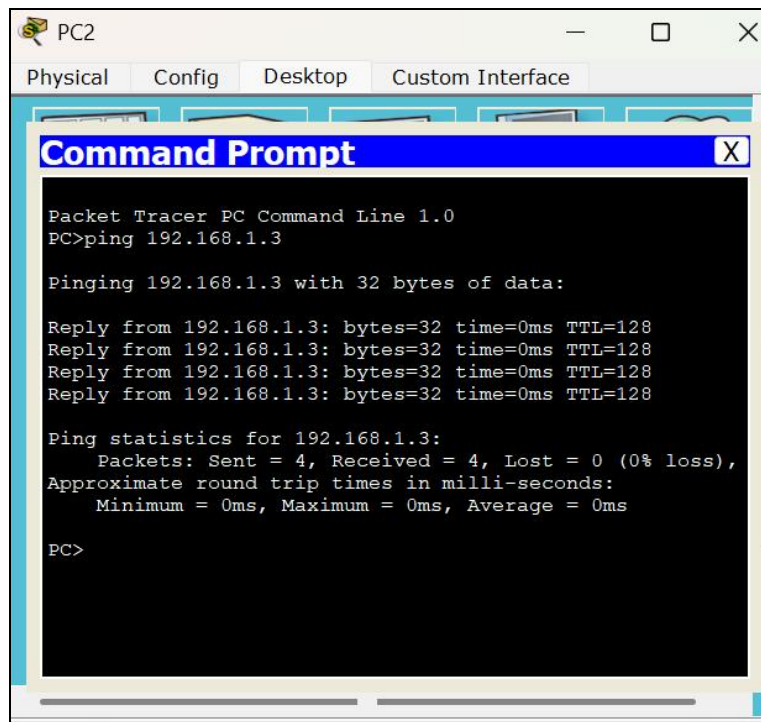
```
PC>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=0ms TTL=128
Reply from 192.168.1.1: bytes=32 time=1ms TTL=128
Reply from 192.168.1.1: bytes=32 time=0ms TTL=128
Reply from 192.168.1.1: bytes=32 time=0ms 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 = 1ms, Average = 0ms
```

## Configuring PC2's CLI and ping other two PCs



```
PC>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=0ms TTL=128
Reply from 192.168.1.2: bytes=32 time=0ms TTL=128
Reply from 192.168.1.2: bytes=32 time=0ms TTL=128
Reply from 192.168.1.2: bytes=32 time=0ms TTL=128

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

PC>
```



After pinging all PCs via CLI and checking it through simulation,

**Simulation Panel**

Event List

Vis.	Time(sec)	Last De	At Dev	Type	Info
	0.756	--	Switc...	STP	
	0.757	Switch5	PC0	STP	
	0.757	Switch5	PC1	STP	
	0.757	Switch5	PC2	STP	
	2.762	--	Switc...	STP	

Reset Simulation ☒ Constant Delay Capturing... \*

Play Controls

Back Auto Capture / Play Capture / Forward

Event List Filters - Visible Events

ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, LACP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, RADIUS, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, VTP

Edit Filters Show All/None

Event List Simulation

Fire	Last Statu	Sourc	Destinatio	Type	Colo	Time(s	Period	Num	Edit	Delete
	Successful	PC0	PC1	IC...		30.847	N	0	(ed...	(delete)
	Successful	PC0	PC1	IC...		0.000	N	1	(ed...	(delete)

**Logical**

[Root] New Cluster Move Object Set Titled Background Viewport

Simulation Panel

Event List

Vis.	Time(sec)	Last De	At Dev	Type	Info
	0.000	--	PC1	ICMP	
	0.001	PC0	Switc...	ICMP	
	0.001	PC1	Switc...	ICMP	
	0.002	Switch5	PC1	ICMP	
	0.002	Switch5	PC2	ICMP	

Reset Simulation ☒ Constant Delay Captured to: 0.002 s

Play Controls

Back Auto Capture / Play Capture / Forward

Event List Filters - Visible Events

ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, LACP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, RADIUS, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, VTP

Edit Filters Show All/None

Time: 00:04:12.646 Power Cycle Devices PLAY CONTROLS: Back Auto Capture / Play Capture / Forward

Scenario 0

New Delete

Toggle PDU List Window

Fire Last Statu Sourc Destinatio Type Colo Time(s Period Num Edit Delete

	Successful	PC0	PC1	IC...		30.847	N	0	(ed...	(delete)
	In Progr...	PC0	PC1	IC...		0.000	N	1	(ed...	(delete)
	In Progr...	PC1	PC2	IC...		0.000	N	2	(ed...	(delete)

Logical

[Root]

New Cluster

Move Object

Set Tiled Background

View

192.168.1.1

PC-P1

PC2

192.168.1.2

PC-PT

PC0

2950T-24

Switch5

192.168.1.3

PC-P1

PC1

PDU Information at Device: PC1

OSI Model

Outbound PDU Details

At Device: PC1

Source: PC1

Destination: PC2

In Layers

Layer7

Layer6

Layer5

Layer4

Layer3

Layer2

Layer1

Out Layers

Layer7

Layer6

Layer5

Layer4

Layer3: IP Header Src.  
IP: 192.168.1.3, Dest. IP:  
192.168.1.1 ICMP  
Message Type: 8

Layer 2: Ethernet II  
Header 0090.2B89.9CE5  
>> 00D0.D349.3993

Layer 1: Port(s):  
FastEthernet0

1. The Ping process starts the next ping request.

2. The Ping process creates an ICMP Echo Request message and sends it to the lower process.

3. The source IP address is not specified. The device sets it to the port's IP address.

4. The device sets TTL in the packet header.

5. The destination IP address is in the same subnet. The device sets the next-hop to destination.

Simulation Panel

Event List

Vis.	Time(sec)	Last De	At Dev	Type	Info
	0.000	--	PC1	ICMP	
	0.001	PC0	Switc...	ICMP	
	0.001	PC1	Switc...	ICMP	
	0.002	Switch5	PC1	ICMP	
	0.002	Switch5	PC2	ICMP	
	0.003	PC1	Switc...	ICMP	

Reset Simulation

☒ Constant Delay

Play Controls

Back

Auto Capture / Play

Capture

Event List Filters - Visible Events

ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, LACP, NTP, OSPF, OSPFv6, PAgP, POP3, RADIUS, RIP, RIPng, RTSP, SCCP, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, VTP

Edit Filters

Show All/None