

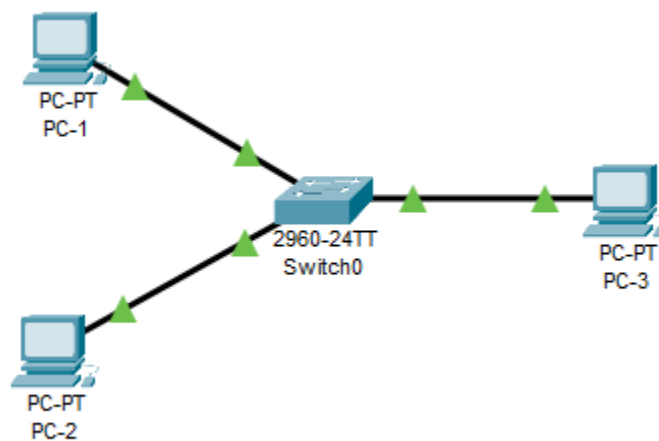
## Project-01: Basic LAN

### 1. Objective

To create a basic LAN using a switch and connect multiple PCs using static IP addressing.

### 2. Network Topology

- One Layer-2 switch
- Three PCs connected to the switch using straight through cable
- All devices are in same network



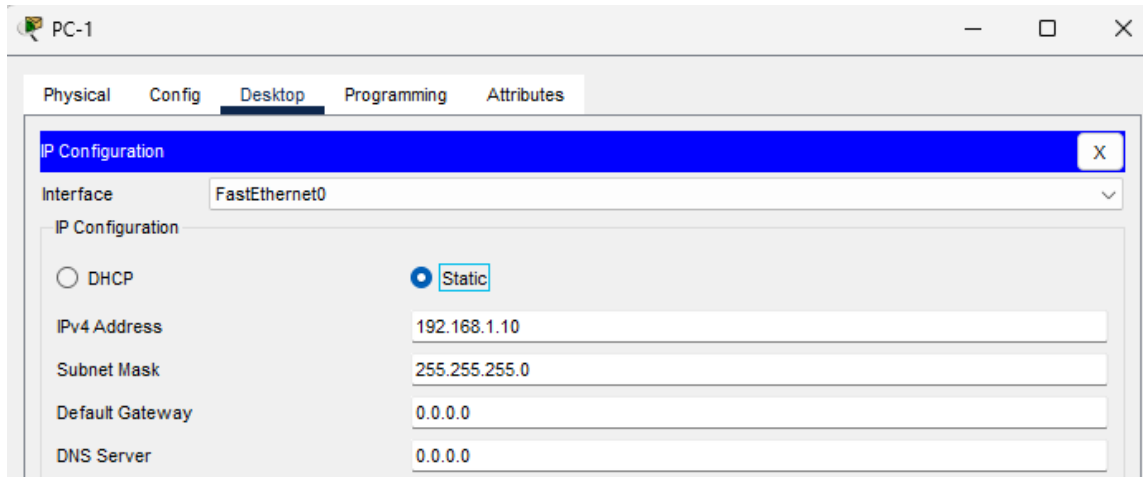
### 3. IP Addressing

Device	IP Address	Subnet Mask
PC-1	192.168.1.10	255.255.255.0
PC-2	192.168.1.11	255.255.255.0
PC-3	192.168.1.12	255.255.255.0

All PCs are in same subnet, so no router is required.

#### 4. Configuration Steps

- Assigned static IP address on each PC
- No configuration needed on switch

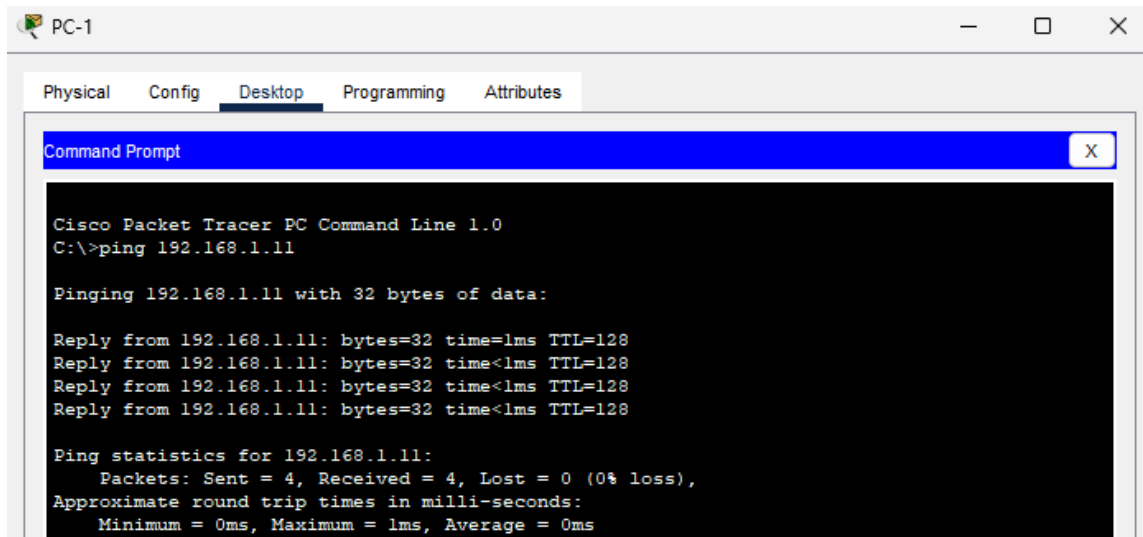


(Repeat for PC-2 & PC-3)

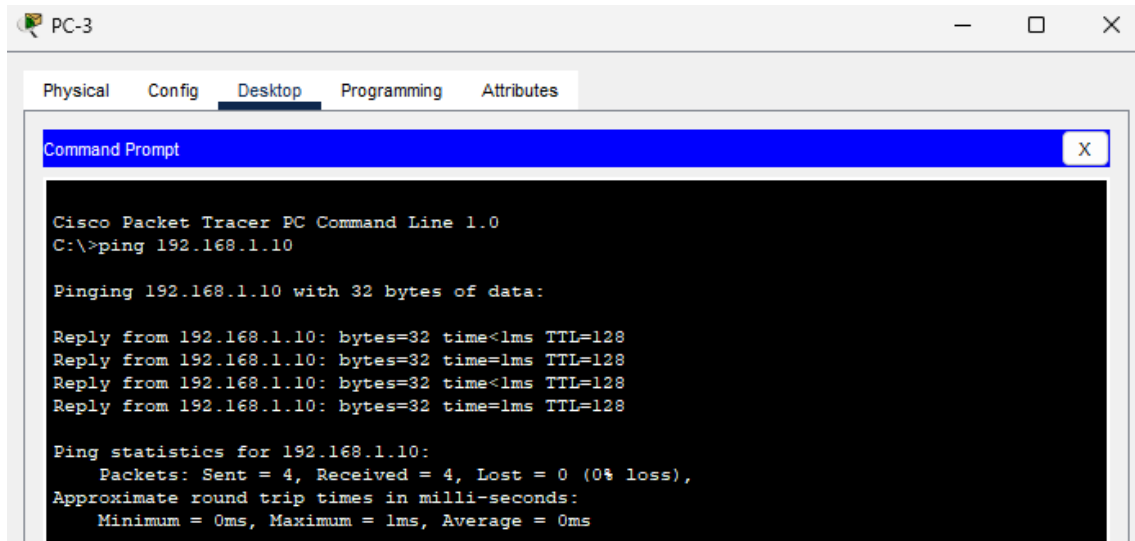
#### 5. Verification

- Ping tested between all PCs

Ping test from PC-1 to PC-2



## Ping test from PC-3 to PC-1



The screenshot shows a window titled "PC-3" with tabs for "Physical", "Config", "Desktop", "Programming", and "Attributes". The "Desktop" tab is active, displaying a "Command Prompt" window. The command prompt shows the following text:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.10

Pinging 192.168.1.10 with 32 bytes of data:

Reply from 192.168.1.10: bytes=32 time<1ms TTL=128
Reply from 192.168.1.10: bytes=32 time=1ms TTL=128
Reply from 192.168.1.10: bytes=32 time<1ms TTL=128
Reply from 192.168.1.10: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

## 6. Explanation

The switch works at Layer-2 and forwards traffic based on MAC address. Since all PCs are in same network, communication happens directly through the switch.

## 7. Common Issues

- Wrong IP address
- Duplicate IP
- Cable connection issue