

# CN LAB EXAM

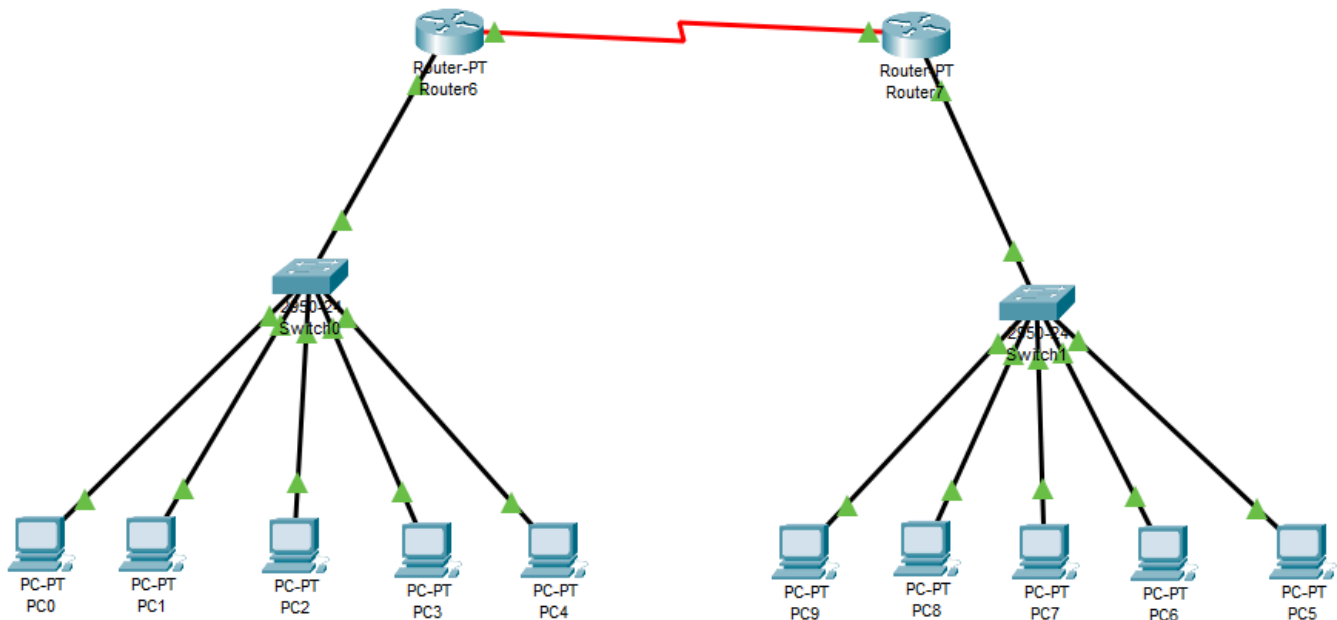
## Objective

- To configure static and default routing on routers to enable communication between different network segments.
- Using cisco packet tracer, to create a network with multiple routers and PCs, and configure routing to ensure proper data transfer.

## Steps taken to set up the network

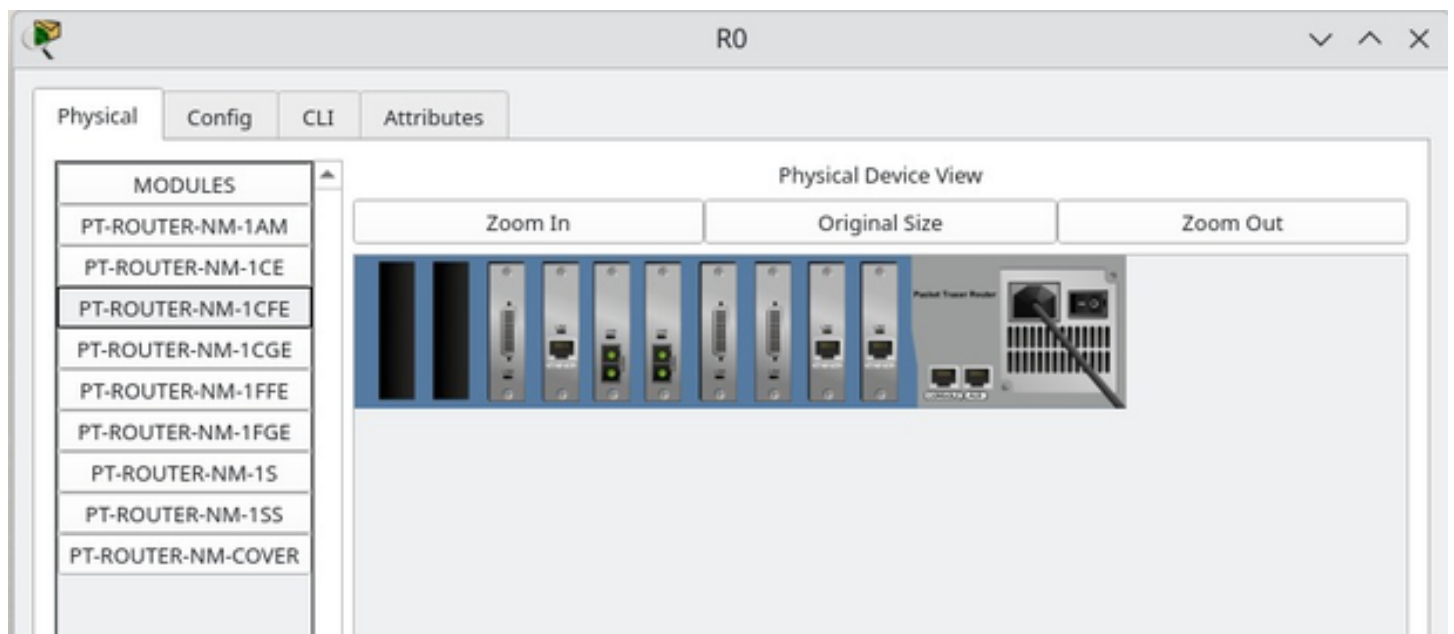
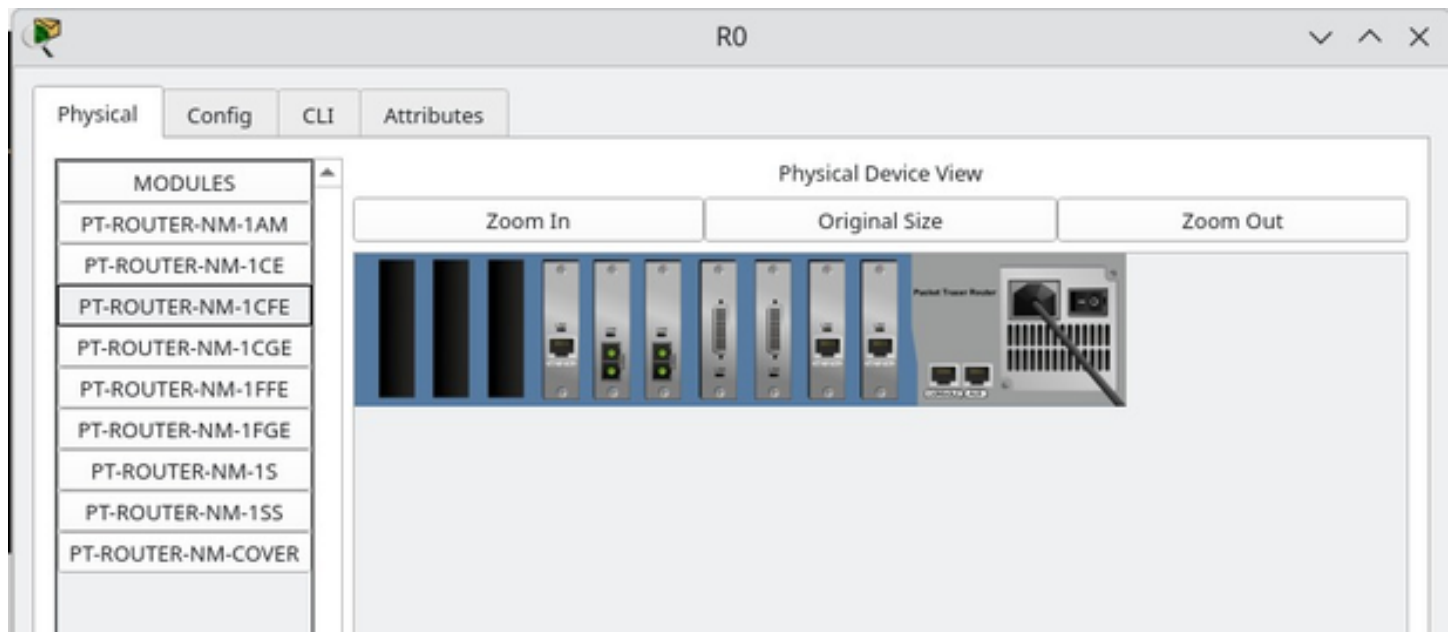
### Step 1:

Select and drag required network devices (2 Router-PTs, 2 2960-24TT Switches) and end devices (10 PC-PTs).



### Step 2:

Open Routers and add PT-ROUTER-NM-1CFE and PT-ROUTER-NM-1S Modules.



### Step 3:

Connect the cables (Straight through cables for different devices) and Serial DCE (between routers).

### Step 4:

Open the routers CLI and type in the following commands (R0)

```
Router>enable
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa 0/0
Router(config-if)#ip address 192.168.20.1 255.255.255.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#int se2/0
Router(config-if)#ip address 192.168.1.2 255.255.255.252
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

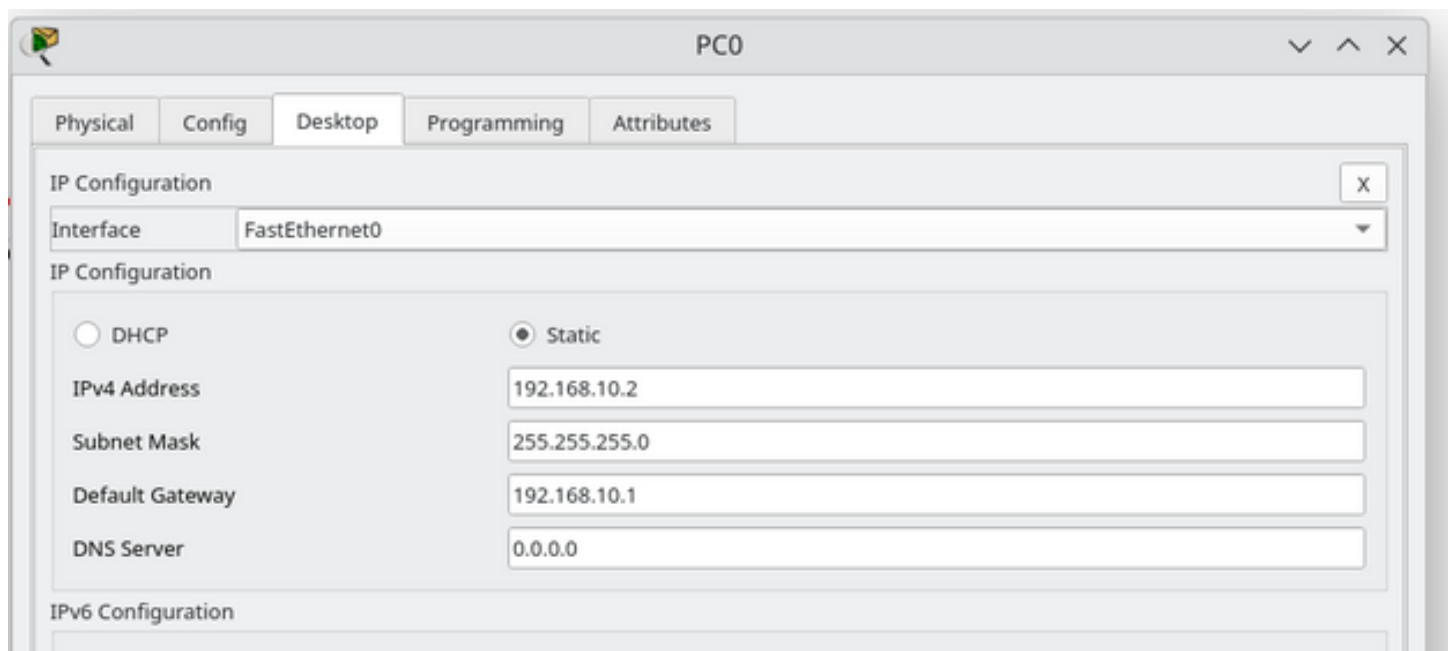
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#
```

Similarly do it for R1.

## Step 5:

Configure IP addresses for PC1 and PC2



The screenshot shows a window titled "PC0" with tabs for Physical, Config, Desktop, Programming, and Attributes. The "Config" tab is active, and the "IP Configuration" section is expanded. The "Interface" dropdown is set to "FastEthernet0". Under "IP Configuration", the "Static" radio button is selected. The fields are filled with the following values:

Field	Value
IPv4 Address	192.168.10.2
Subnet Mask	255.255.255.0
Default Gateway	192.168.10.1
DNS Server	0.0.0.0

Below this, the "IPv6 Configuration" section is visible but not expanded.

PC1

Physical Config Desktop Programming Attributes

IP Configuration

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

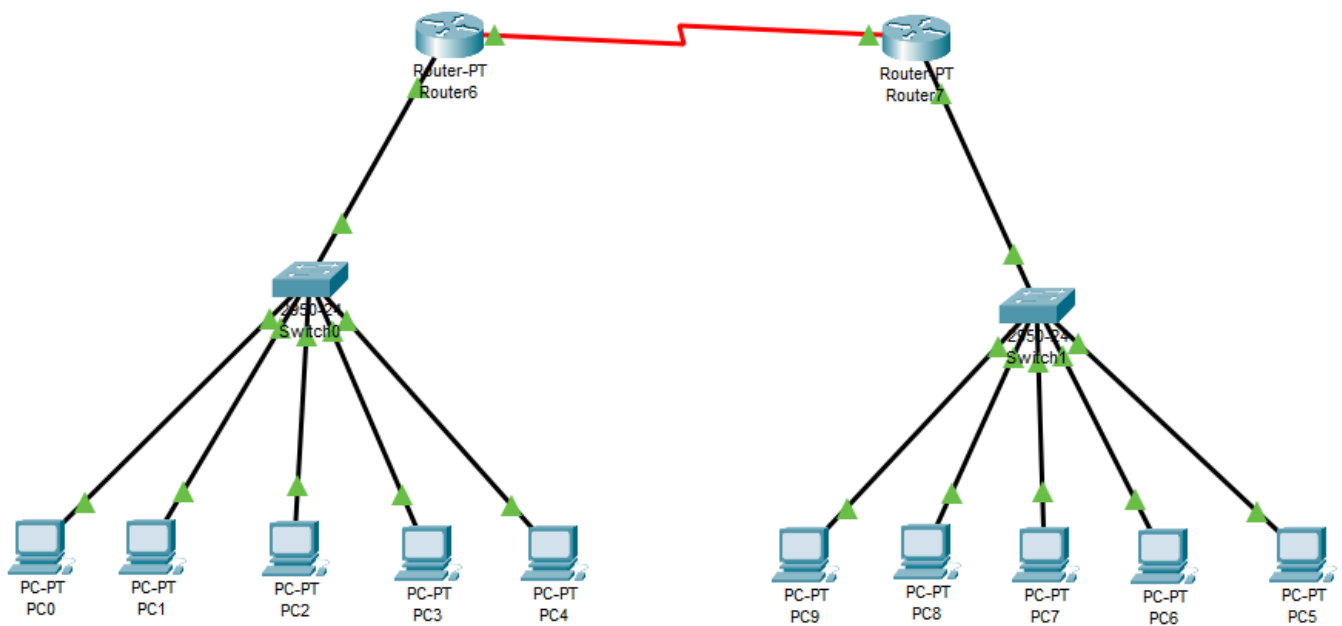
IPv4 Address 192.168.20.2

Subnet Mask 255.255.255.0

Default Gateway 192.168.20.1

DNS Server 0.0.0.0

IPv6 Configuration



## Step 6:

Configure Static Routing and Default Routing for Routers.

This is for R0, Implement the similar for R1 (default and static pointing to R0).

