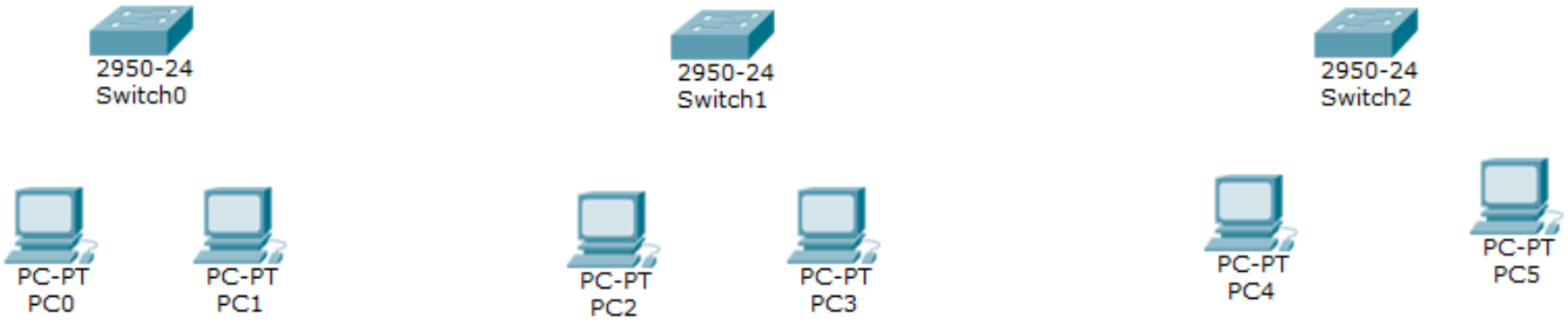
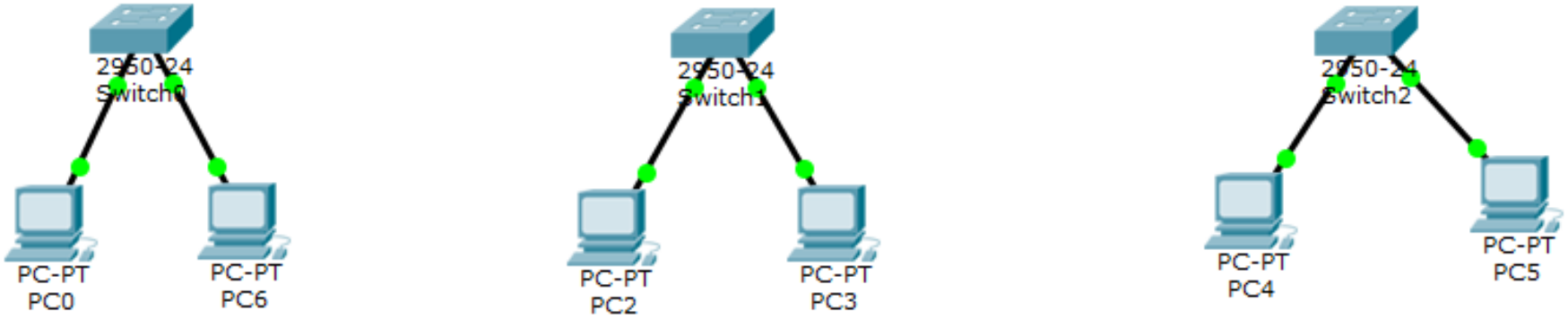
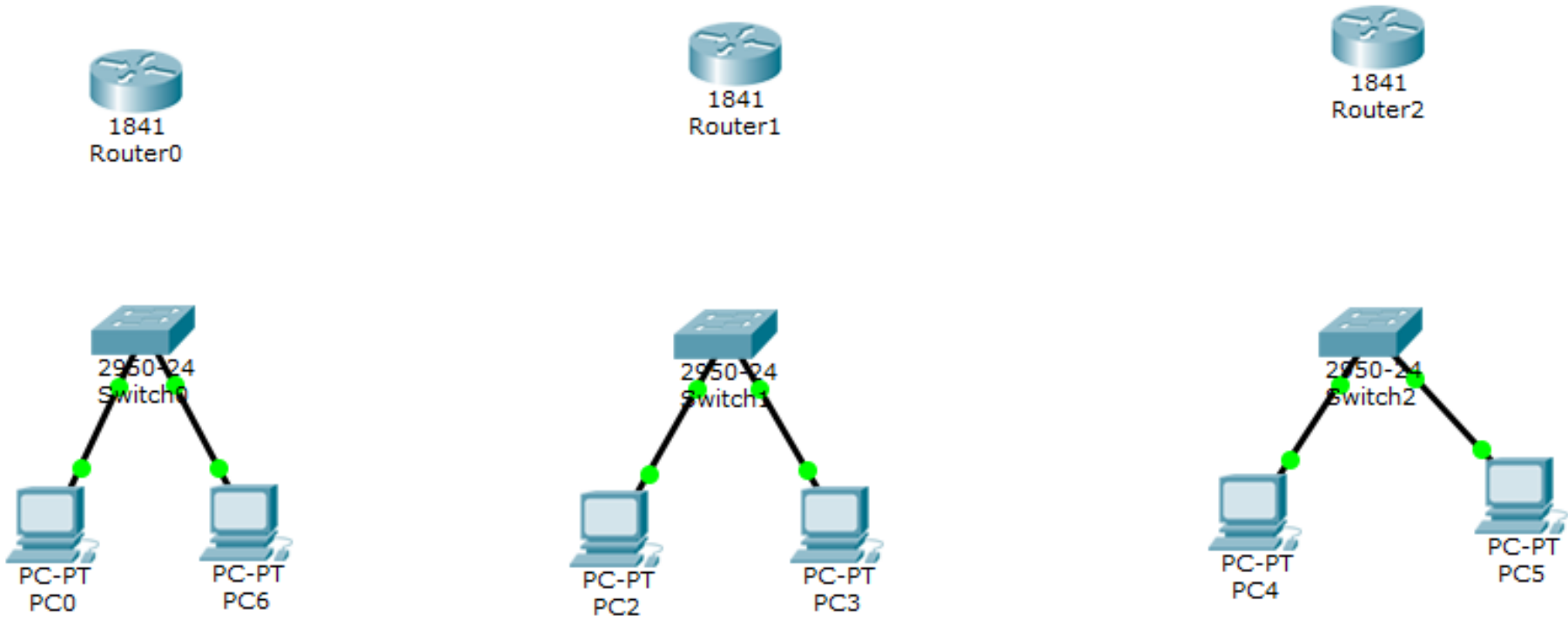
Assignment 7: Configuration of RIP (routing information protocol) dynamic routing using three routers, three switches and six PC

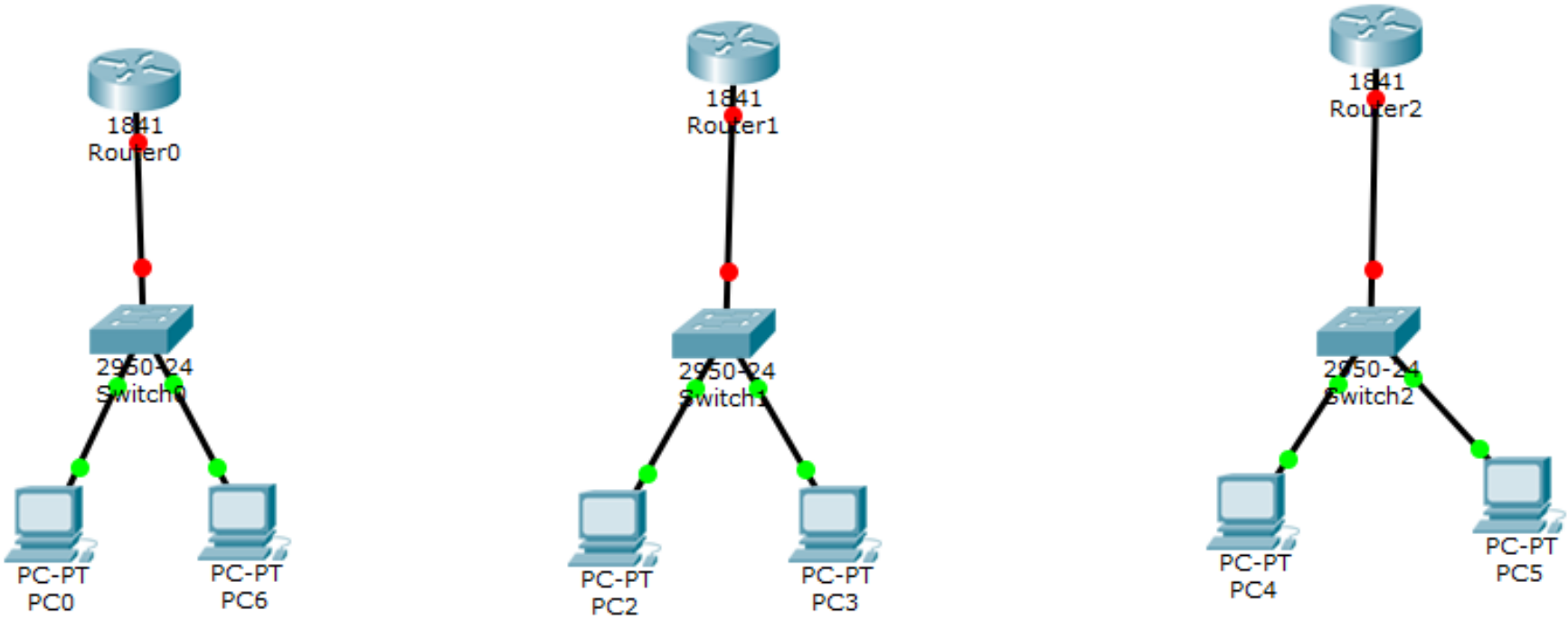


Connect them using copper straight through wires.

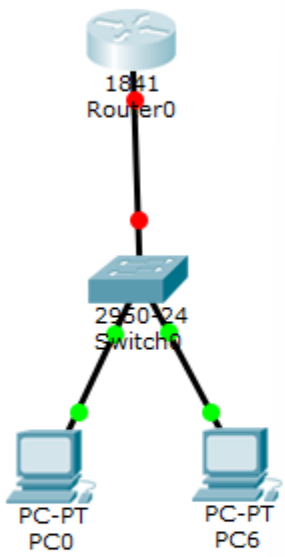




Connect switches to fastethernet0 port of each router using copper straight through wires.


1841
Router0
2950-24
Switch0
PC-PT
PC0
PC-PT
PC6
1841
Router1
2950-24
Switch1
PC-PT
PC2
PC-PT
PC3
1841
Router2
2950-24
Switch2
PC-PT
PC4
PC-PT
PC5

Go to router configuration, it will allow only two wires to connect in two port.



Router0

Physical | Config | CLI

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1

Global Settings

Display Name: Router0

Hostname: Router

NVRAM: Erase | Save

Startup Config: Load... | Export...

Running Config: Merge... | Export...

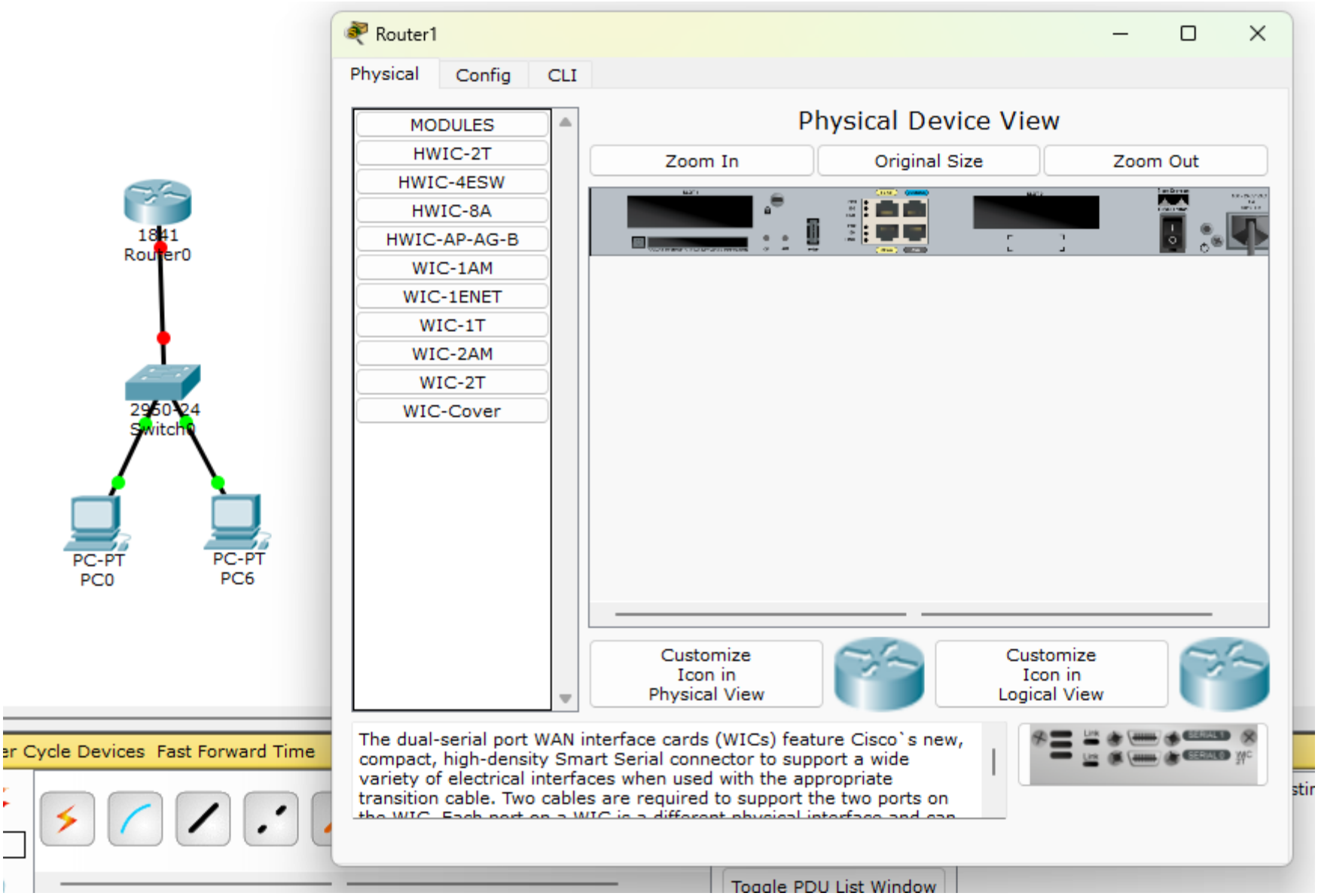
Equivalent IOS Commands

```
        --- System Configuration Dialog ---

Continue with configuration dialog? [yes/no]: n


Press RETURN to get started!
```

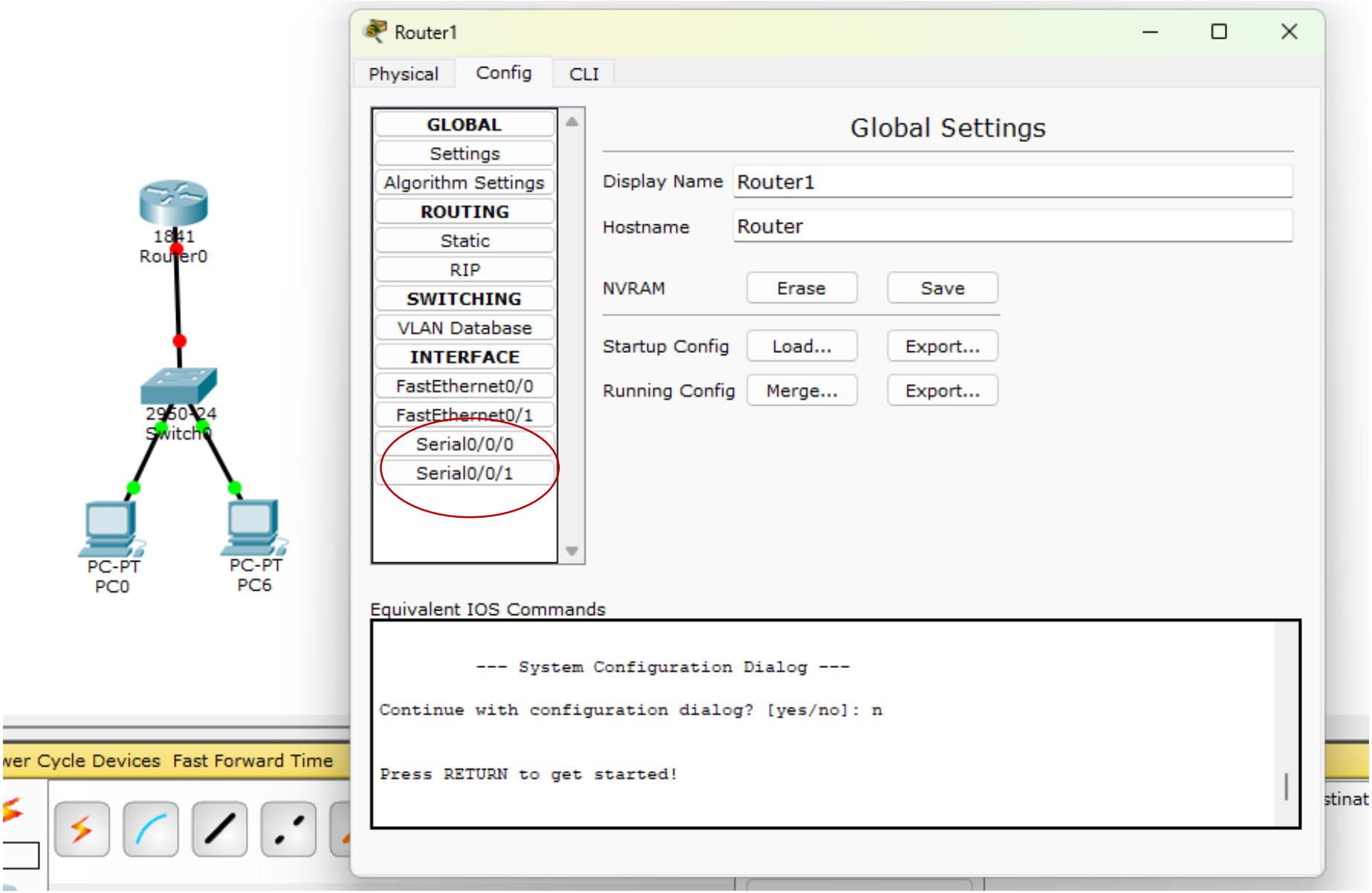
ver Cycle Devices Fast Forward Time

Toggle PDU List Window

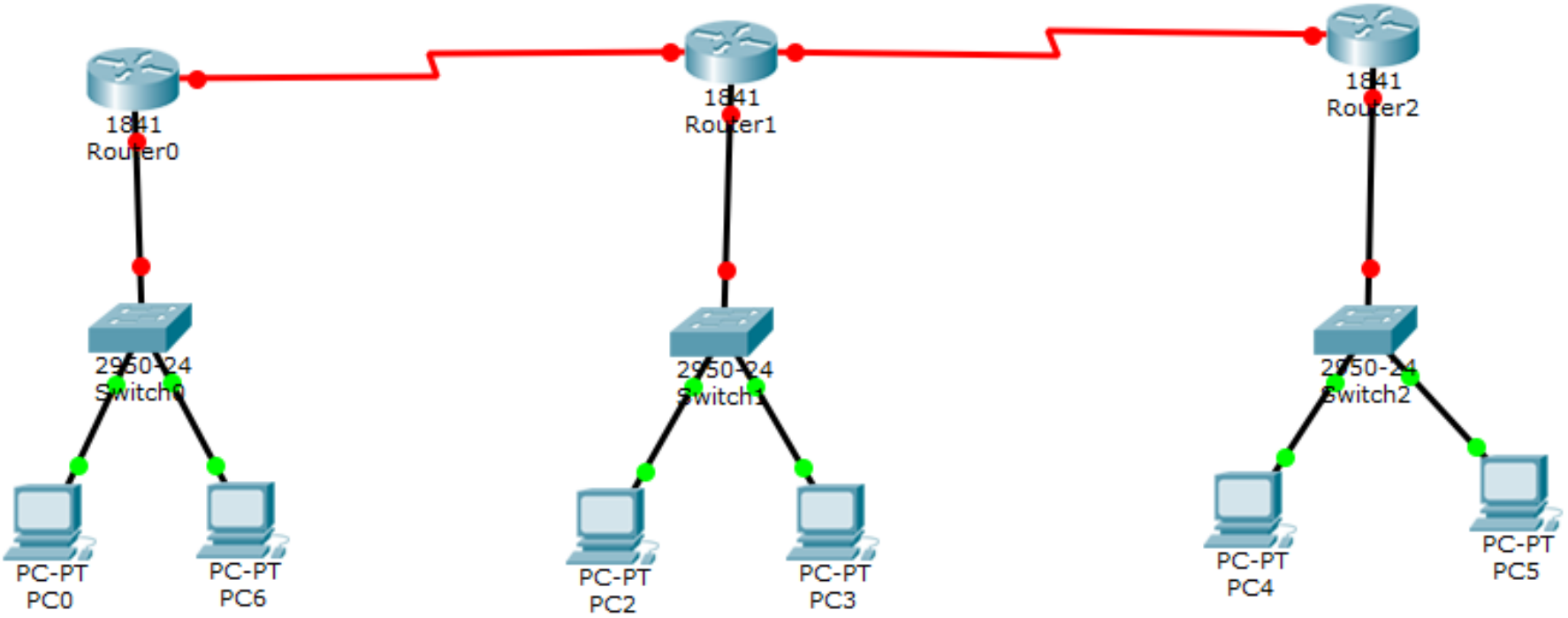
We need to add extra port to all the router. Go to physical mode of each router. Click WIC-2T. Turn off the switch. Take extra ports from bottom and place it. Turn on the switch again.

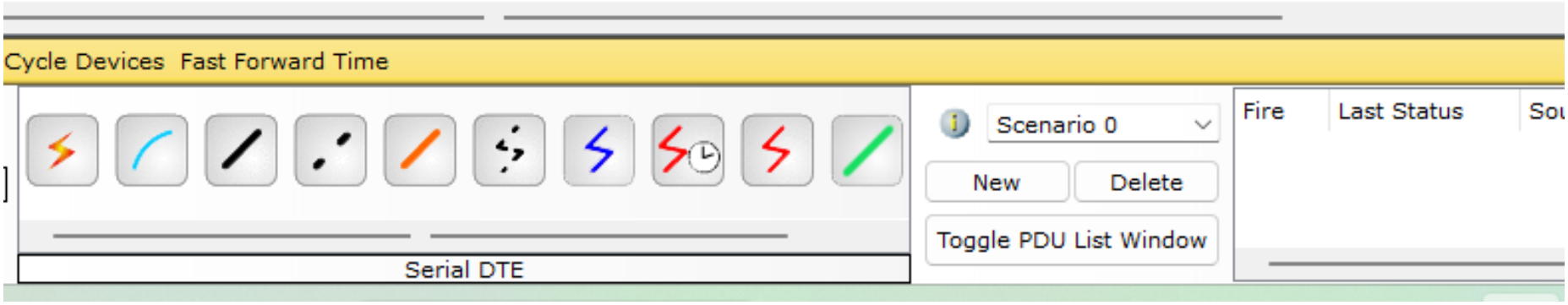

Router1
Physical
Config
CLI
MODULES
HWIC-2T
HWIC-4ESW
HWIC-8A
HWIC-AP-AG-B
WIC-1AM
WIC-1ENET
WIC-1T
WIC-2AM
WIC-2T
WIC-Cover
Physical Device View
Zoom In
Original Size
Zoom Out
Customize Icon in Physical View
Customize Icon in Logical View
The dual-serial port WAN interface cards (WICs) feature Cisco`s new, compact, high-density Smart Serial connector to support a wide variety of electrical interfaces when used with the appropriate transition cable. Two cables are required to support the two ports on
1841
Router0
2950-24
Switch0
PC-PT
PC0
PC-PT
PC6
er Cycle Devices
Fast Forward Time
Toggle PDU List Window

You can see two extra serial ports are there.

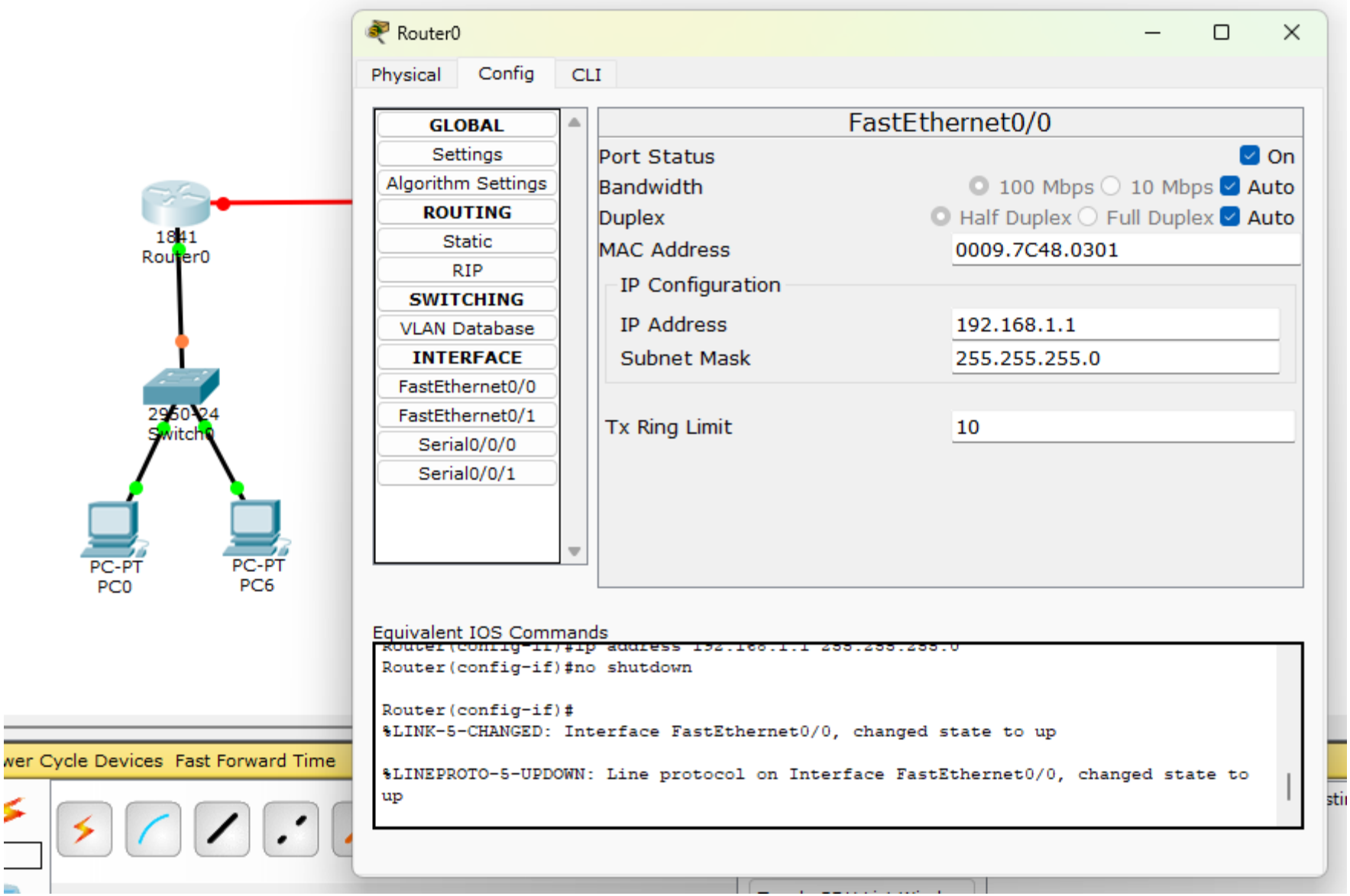


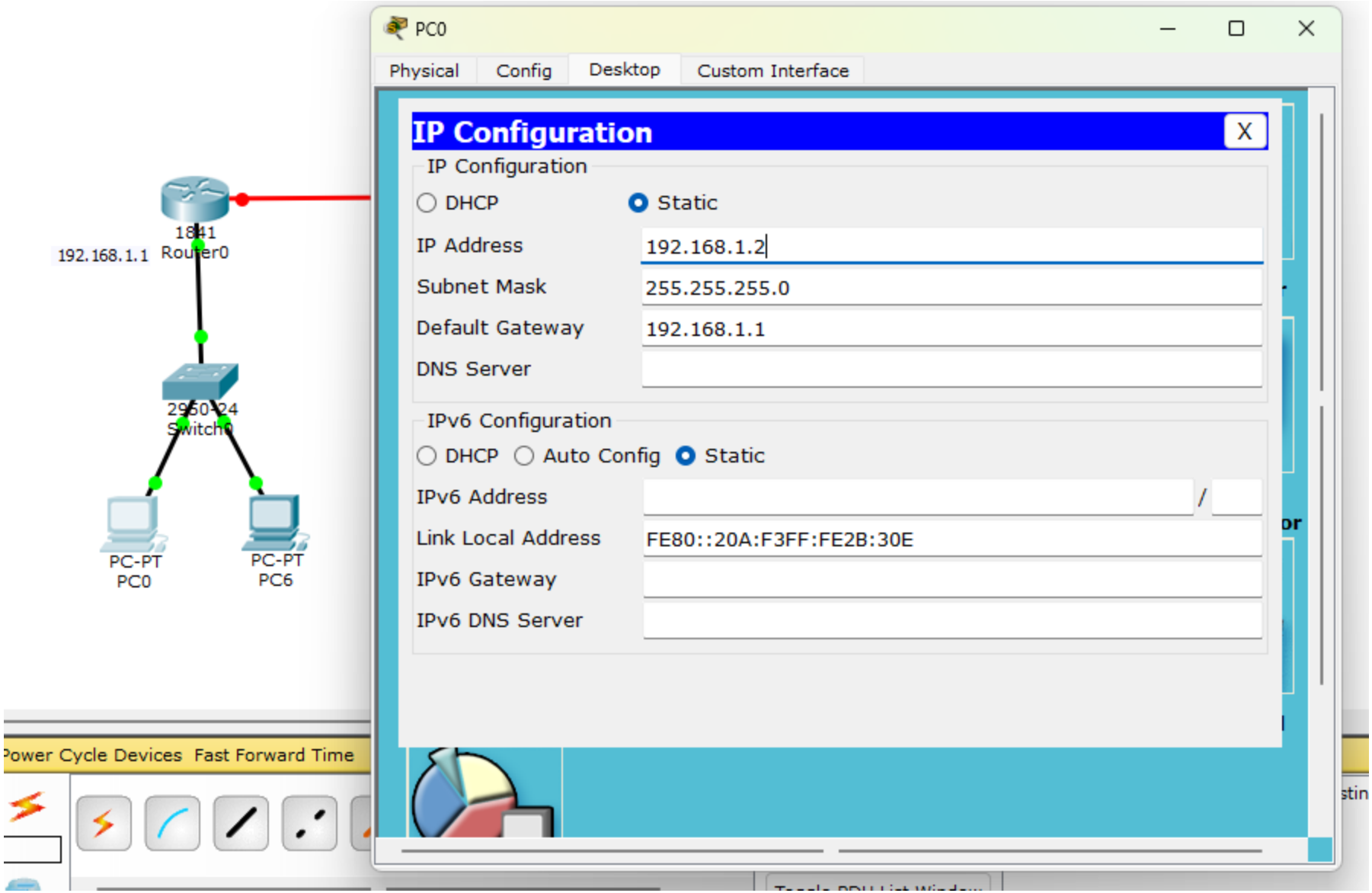
Connect serial ports of router using serial DTE lines.

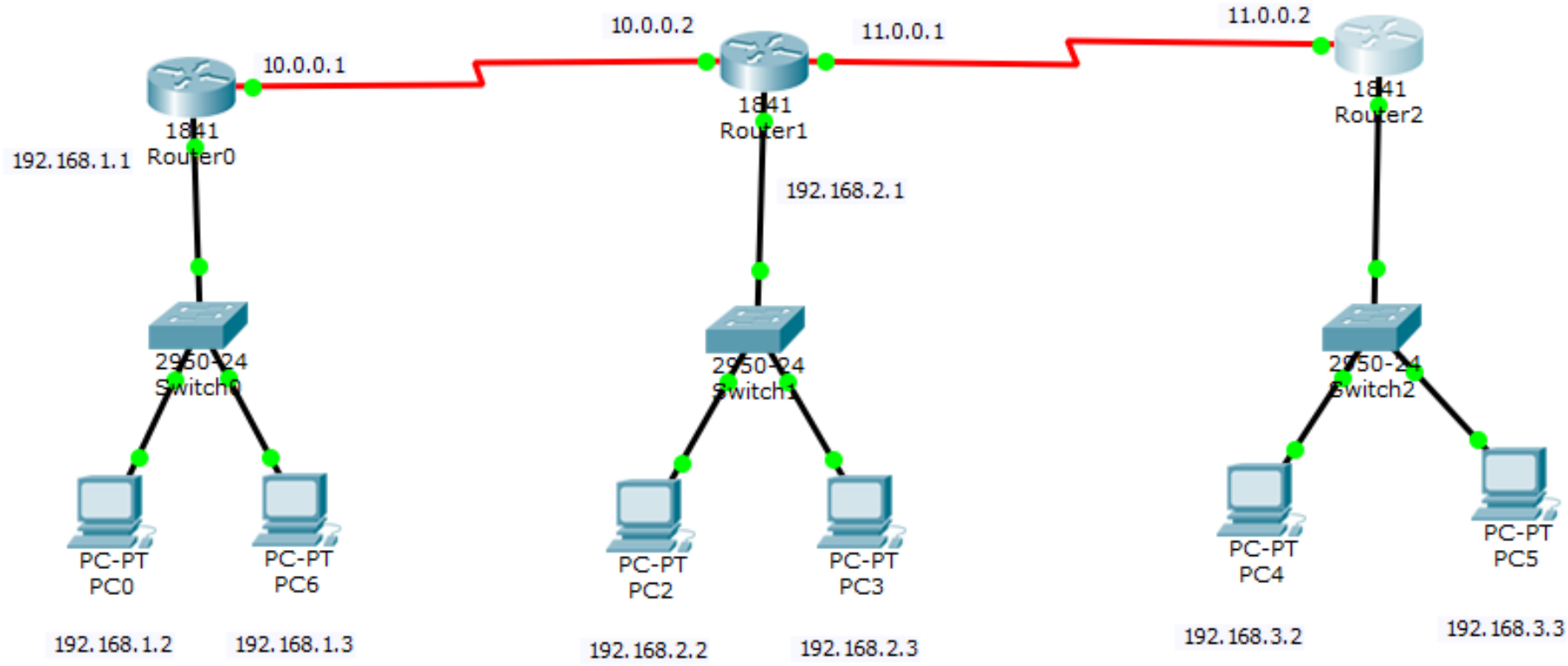




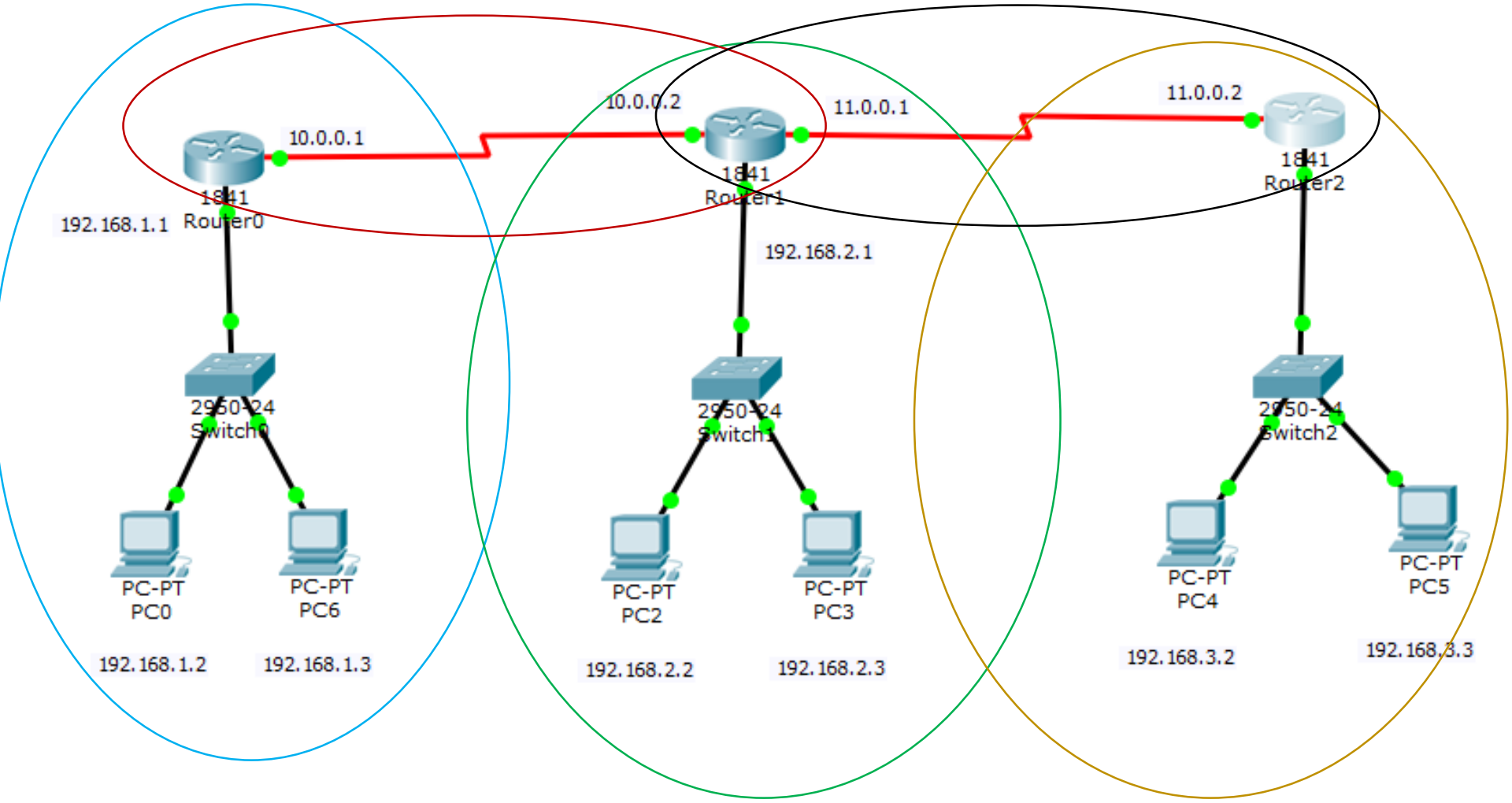
Configure all the routers and pcs with IP address.



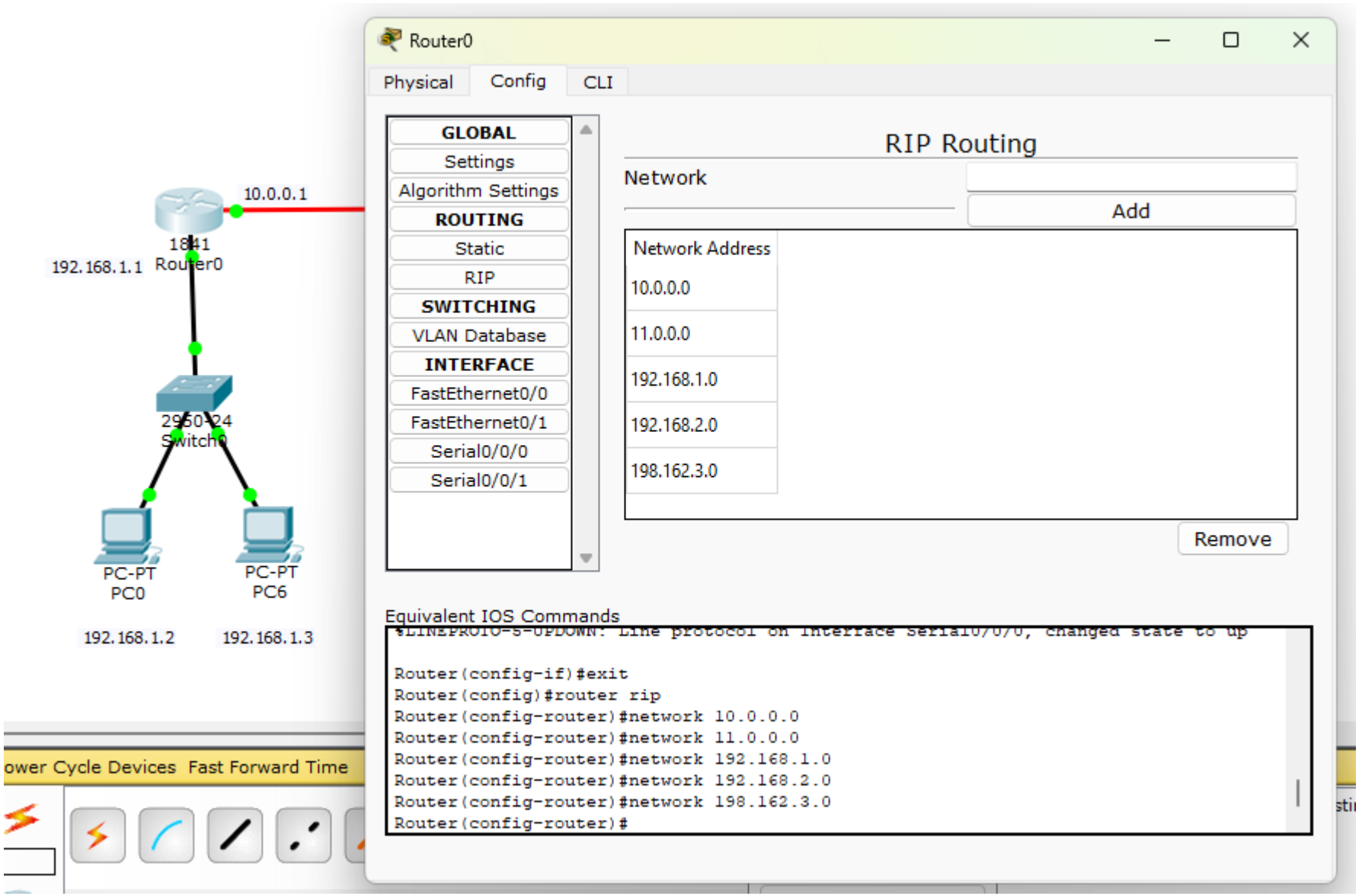

PC0
Physical
Config
Desktop
Custom Interface
IP Configuration
X
IP Configuration
DHCP
Static
IP Address
192.168.1.2
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::20A:F3FF:FE2B:30E
IPv6 Gateway
IPv6 DNS Server
1841
Router0
192.168.1.1
2950-24
Switch0
PC-PT
PC0
PC-PT
PC6
Power Cycle Devices
Fast Forward Time


10.0.0.1
10.0.0.2
11.0.0.1
11.0.0.2
1841
Router0
1841
Router1
1841
Router2
192.168.1.1
192.168.2.1
2950-24
Switch0
2950-24
Switch1
2950-24
Switch2
PC-PT
PC0
PC-PT
PC6
PC-PT
PC2
PC-PT
PC3
PC-PT
PC4
PC-PT
PC5
192.168.1.2
192.168.1.3
192.168.2.2
192.168.2.3
192.168.3.2
192.168.3.3

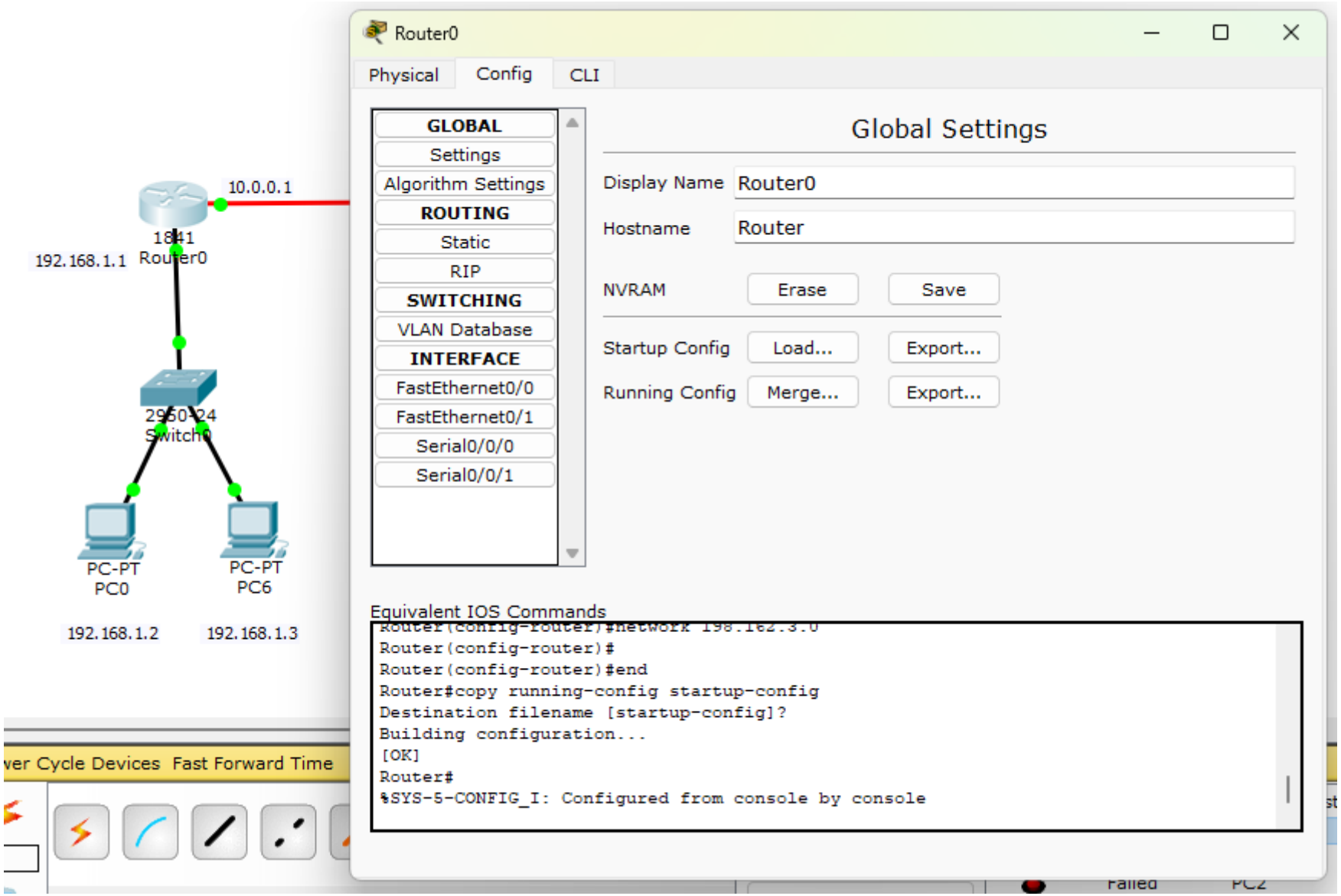
Now we can configure dynamic routing before sending data.

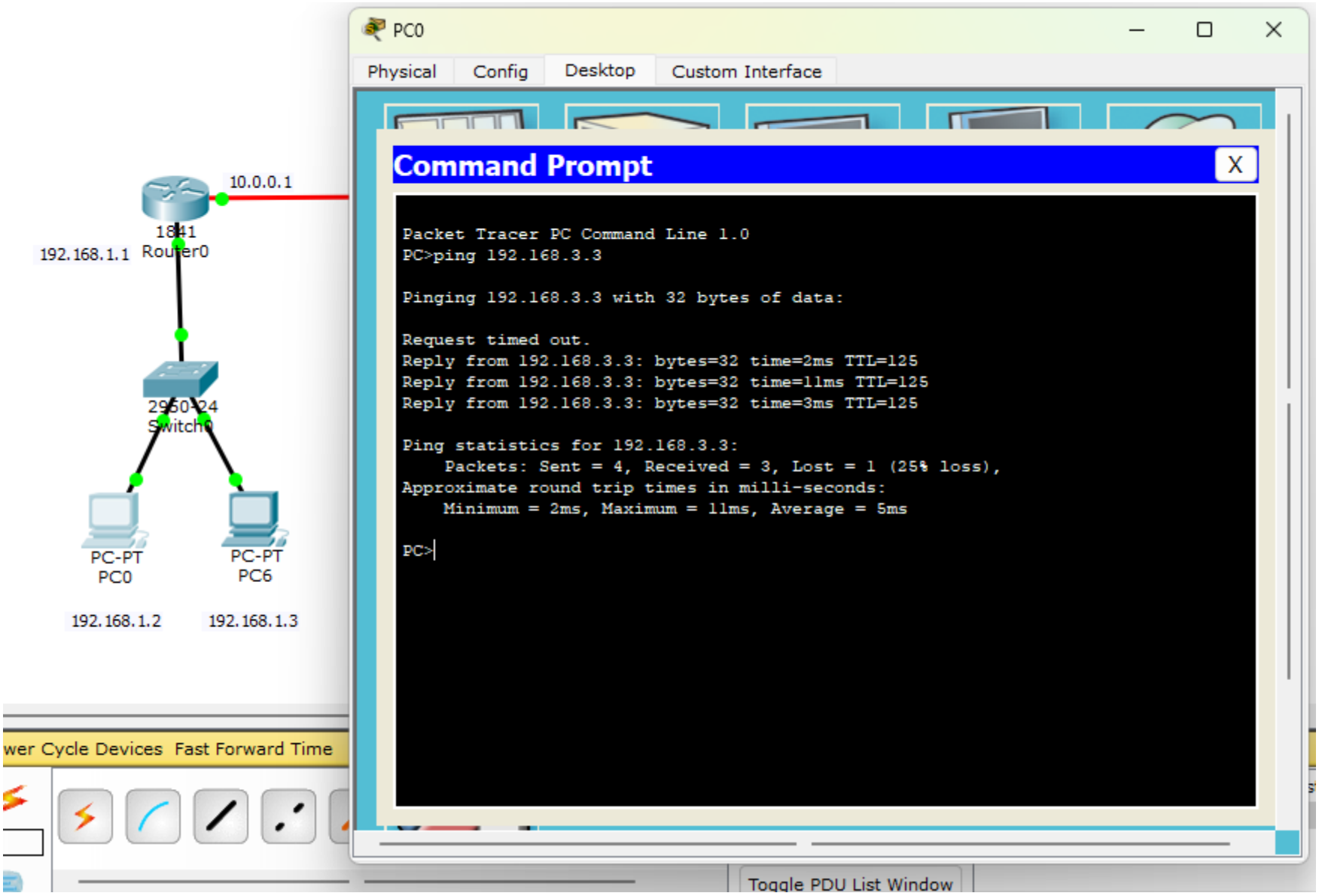

10.0.0.1
10.0.0.2
11.0.0.1
11.0.0.2
1841
Router0
1841
Router1
1841
Router2
192.168.1.1
192.168.2.1
2950-24
Switch0
2950-24
Switch1
2950-24
Switch2
PC-PT
PC0
PC-PT
PC6
PC-PT
PC2
PC-PT
PC3
PC-PT
PC4
PC-PT
PC5
192.168.1.2
192.168.1.3
192.168.2.2
192.168.2.3
192.168.3.2
192.168.3.3

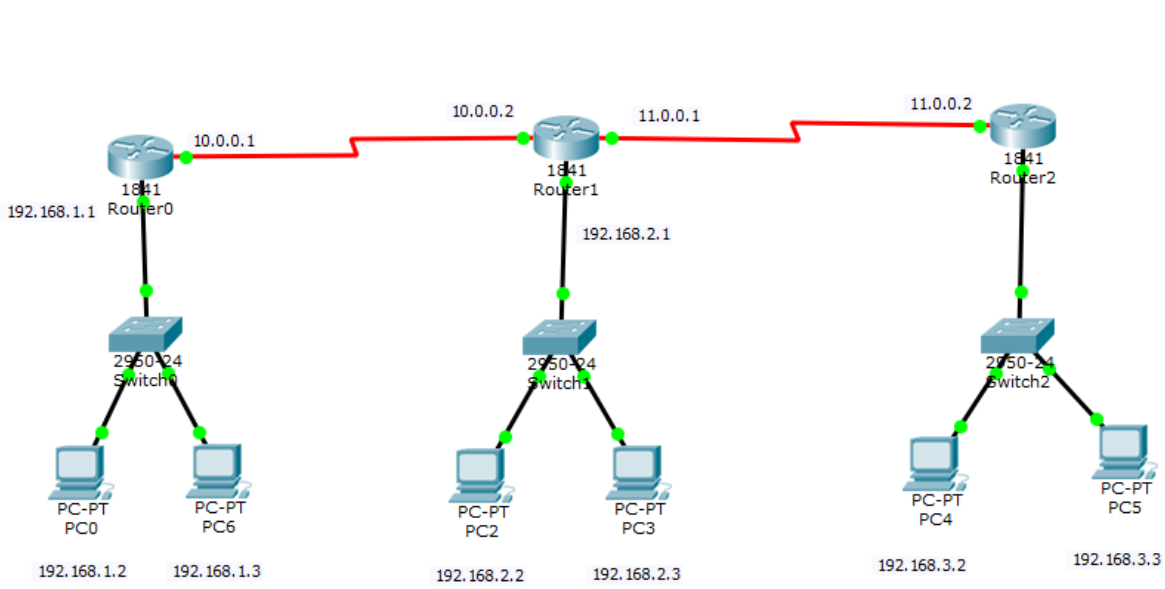
We will add network to each router. Click on router. Go to configure mode. Click RIP. Add different networks.

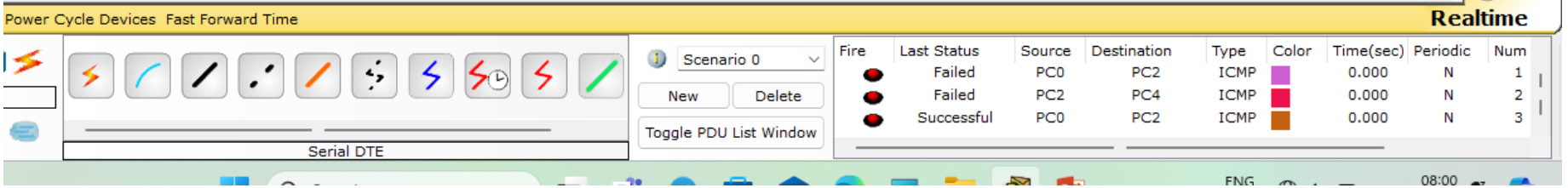


Now go to setting and click on save button.




10.0.0.1
1841
Router0
192.168.1.1
2950-24
Switch0
PC-PT
PC0
PC-PT
PC6
192.168.1.2
192.168.1.3
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 192.168.3.3
Pinging 192.168.3.3 with 32 bytes of data:
Request timed out.
Reply from 192.168.3.3: bytes=32 time=2ms TTL=125
Reply from 192.168.3.3: bytes=32 time=11ms TTL=125
Reply from 192.168.3.3: bytes=32 time=3ms TTL=125
Ping statistics for 192.168.3.3:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 2ms, Maximum = 11ms, Average = 5ms
PC>
wer Cycle Devices
Fast Forward Time
Toggle PDU List Window


10.0.0.1
10.0.0.2
11.0.0.1
11.0.0.2
1841
Router0
1841
Router1
1841
Router2
192.168.1.1
192.168.2.1
2950-24
Switch0
2950-24
Switch1
2950-24
Switch2
PC-PT
PC0
PC-PT
PC6
PC-PT
PC2
PC-PT
PC3
PC-PT
PC4
PC-PT
PC5
192.168.1.2
192.168.1.3
192.168.2.2
192.168.2.3
192.168.3.2
192.168.3.3


Power Cycle Devices
Fast Forward Time
Realtime
Serial DTE
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Failed
PC0
PC2
ICMP
0.000
N
1
Failed
PC2
PC4
ICMP
0.000
N
2
Successful
PC0
PC2
ICMP
0.000
N
3