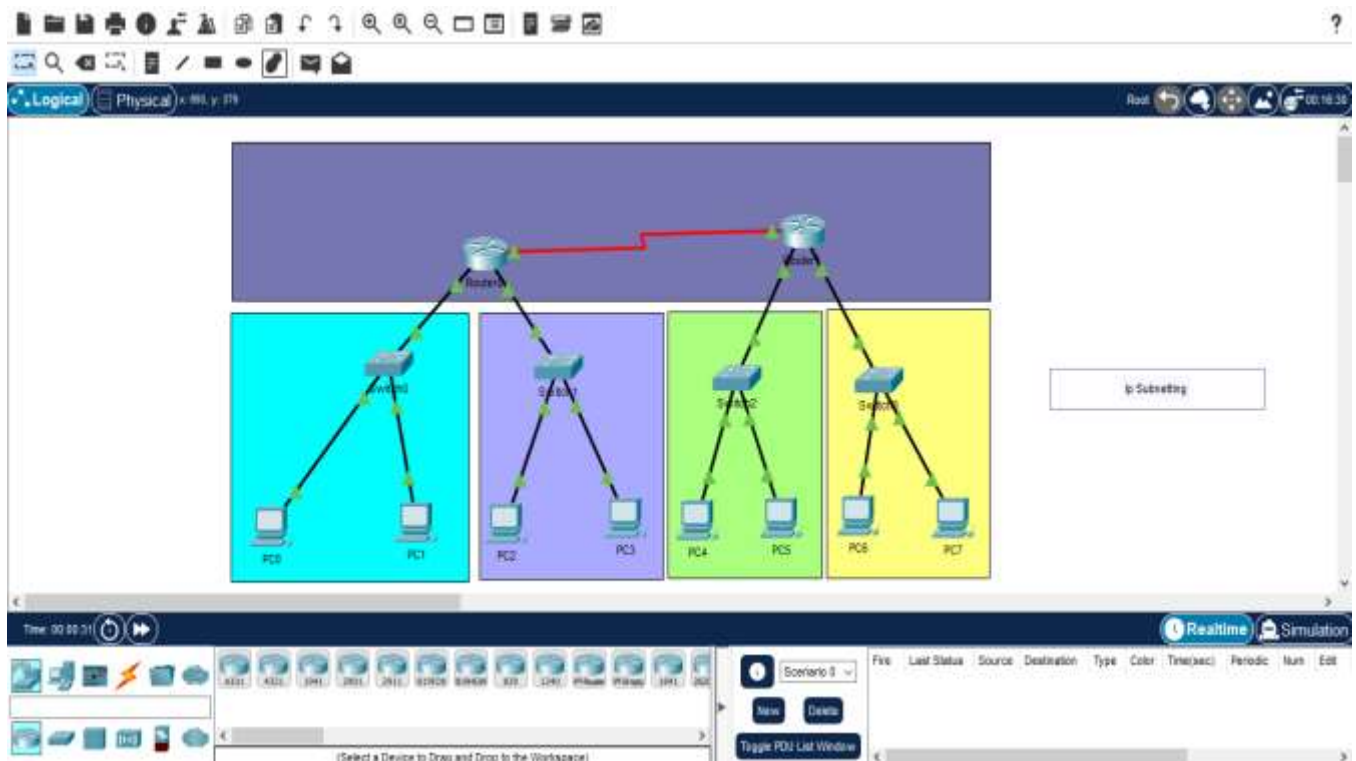


TASK

IP Subnetting in Cisco Packet Tracer

Step 1: Create a topology in Cisco packet tracer

- These are routers and these networks are subnet networks in figure below.
- Connected a copper pass-through between the computer switch and the router switch.
- Connected serial DCE cable to establish a serial connection between the two routers. With the DCE cable (clocked red zigzag) the serial side of the first router will be DCE, and the serial side of the second router will be DTE. And DCE has to transmit the clock signal controlling the data rate, and the DTE receives the clock signal.



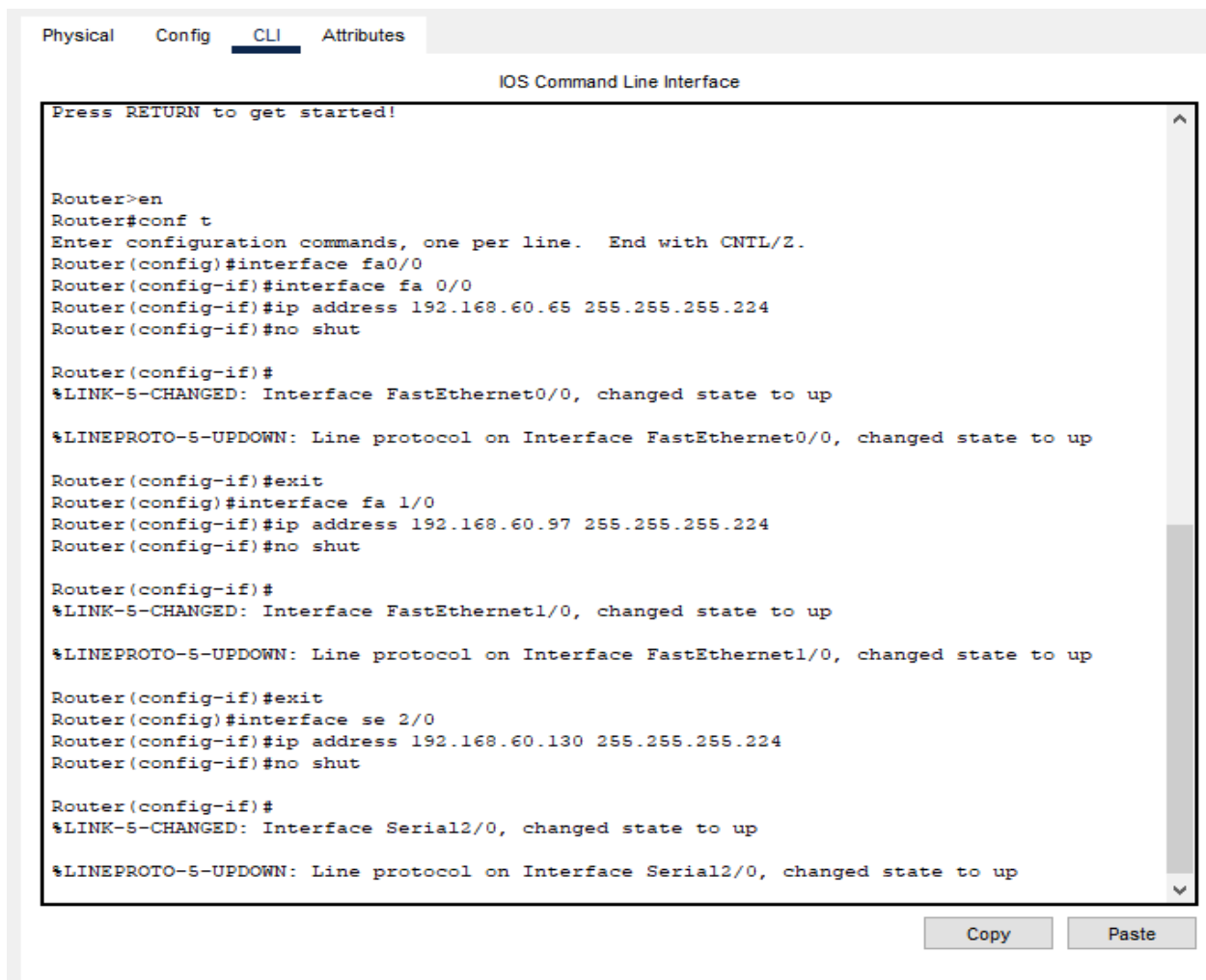
Step 2: Set the computer's IP address

- Then go to IP configuration and set the computer's IP address, subnet mask and default gateway.
- The default gateways here are the IP addresses of the router interfaces facing the PCs. This is how the IP settings of all computers are made.

The screenshot shows a network configuration window titled "IP Configuration" with a close button (X) in the top right corner. The window has a tabbed interface with tabs for "Physical", "Config", "Desktop", "Programming", and "Attributes". The "Desktop" tab is currently selected. Inside the window, the "Interface" dropdown menu is set to "FastEthernet0". The "IP Configuration" section contains two radio buttons: "DHCP" (unselected) and "Static" (selected). Below these are four text input fields: "IPv4 Address" (192.168.60.3), "Subnet Mask" (255.255.255.224), "Default Gateway" (192.168.60.1), and "DNS Server" (0.0.0.0). The "IPv6 Configuration" section also has two radio buttons: "Automatic" (unselected) and "Static" (selected). It includes four text input fields: "IPv6 Address" (empty), "Link Local Address" (FE80::240:BFF:FEAB:E75C), "Default Gateway" (empty), and "DNS Server" (empty). The "802.1X" section has a checkbox for "Use 802.1X Security" which is unchecked. Below this is a dropdown menu for "Authentication" set to "MD5", and two text input fields for "Username" and "Password", both of which are empty.

Step 3: Connection of routers

- Come to the CLI section of the router and activate it by typing “enable” in the command line that appears.
- Write “configure terminal” to put it in configuration mode. Then write the interface you want to set.
- Then set this interface by entering the IP and subnet mask and activate the closed interface by typing “no shutdown”.



```
Physical  Config  CLI  Attributes

IOS Command Line Interface

Press RETURN to get started!

Router>en
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface fa0/0
Router(config-if)#ip address 192.168.60.65 255.255.255.224
Router(config-if)#no shut

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

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#interface fa 1/0
Router(config-if)#ip address 192.168.60.97 255.255.255.224
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

Router(config-if)#exit
Router(config)#interface se 2/0
Router(config-if)#ip address 192.168.60.130 255.255.255.224
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
```

Copy Paste

Step 4: Send a package

- After these operations were completed, send a package and verify that packet transfer is working

