

# Assignment# 2

- Course: Internet & Intranet Architecture
- Deadline: 04<sup>th</sup> January, 2023

- Semester: Fall - 2022
- Total Marks: 10

## **Note: Submit in printed form only.**

**Question:** Design a Hybrid network which consists of 7 routers. Use serial cable between routers. Attach 4 PCs with router-1 to router-6 and connects a FTP server with router-7. The requirements are as follows.

- 1- All the devices must be on your name. (Tag all the devices on network diagram)
  - 2- Assign IP addresses on each device.
  - 3- Use both public & private IPs where each can be suitable, **the tagging of IP address is mandatory on network diagram with subnet mask.**
  - 4- You have to apply VLSM on complete network.
  - 5- Configure EIGRP on router-1 and router-2
  - 6- Configure RIPv2 on router-3 and router-4.
  - 7- Configure OSPF on router-5 and router-6
  - 8- Configure Redistribution on router-7.
  - 9- Configure port security on switch connected with router-1, router-3 and router-5. Remaining unusable ports must be shutdown.
  - 10- Configure ACL so that PCs connected router-3 and router-4 cannot access FTP service while all other PCs be able to access the FTP services.
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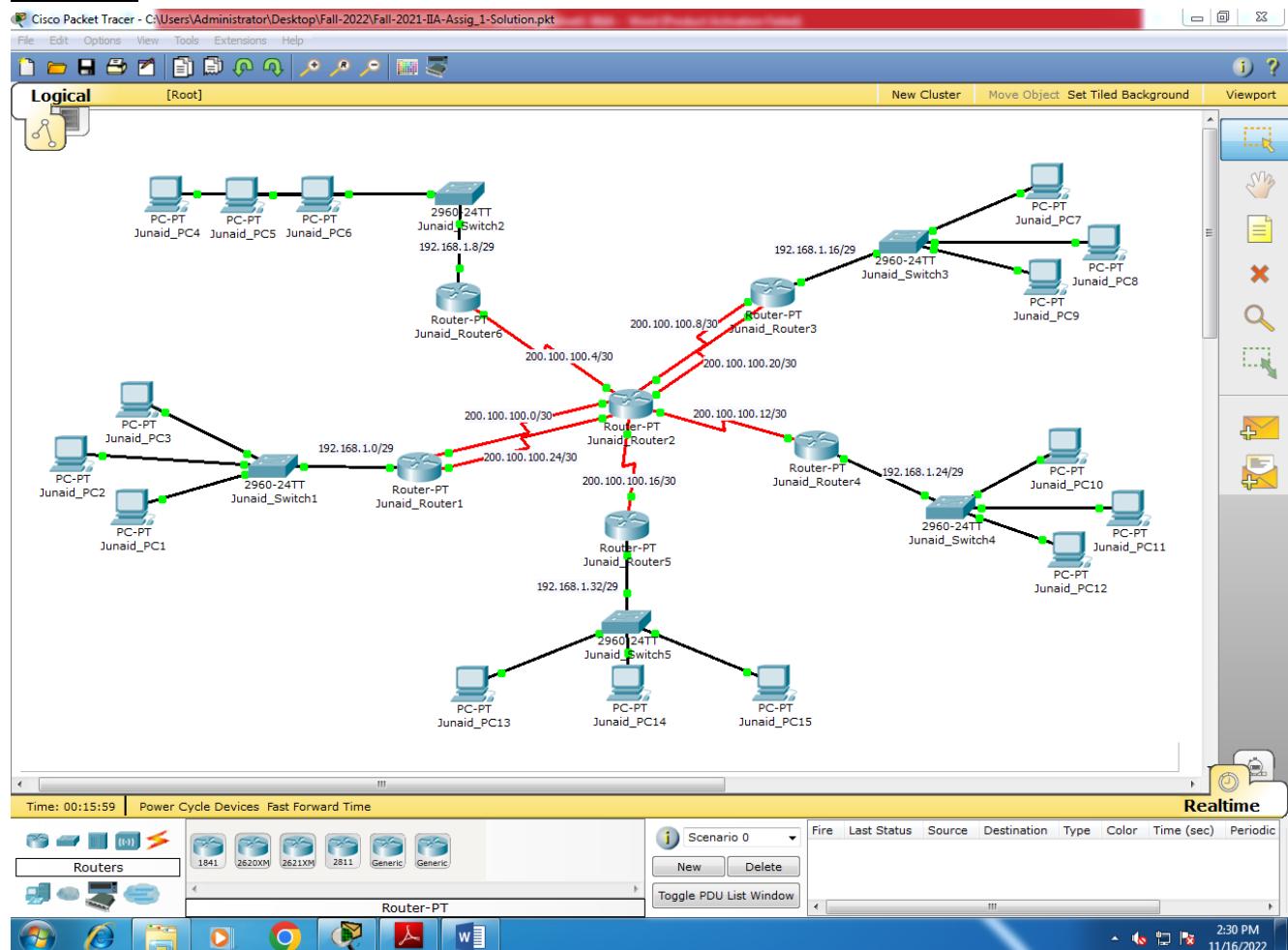
## **Requirements:**

- 1- All the above mentioned details on page 1.
- 2- Network Diagram with complete tagging on page 2 and so on.
- 3- **Router Configuration** of each router with specific router name. (Like **Junaid\_Router\_1** then configuration of this router, **Junaid\_Router\_2** then configuration of this router and so on). In your case, all the routers are on your names. **Host name must be mentioned along with the configuration.**
- 4- **(Don't close your file until you didn't take the configuration snaps otherwise host name will not be appeared). Take the snaps of complete CLI.**  
{Like Junaid\_Router-1(config)#router rip, version, network 100.100.100.0 255.255.255.0 20.20.20.2 }  
(Take snaps of this configuration). Junaid\_Router\_1 is the host name which must be on your name + your student ID}.
- 5- Complete port security configuration code.
- 6- Complete ACL configuration code. **(Access denied and Access successful from PCs snap)**
- 7- IP addresses with subnet mask of all PCs and FTP server.
- 8- **Submit full-screen snaps of your system. Do not submit the crop and blur snaps of CLI tab, as it will not be consider and will not be marked.**

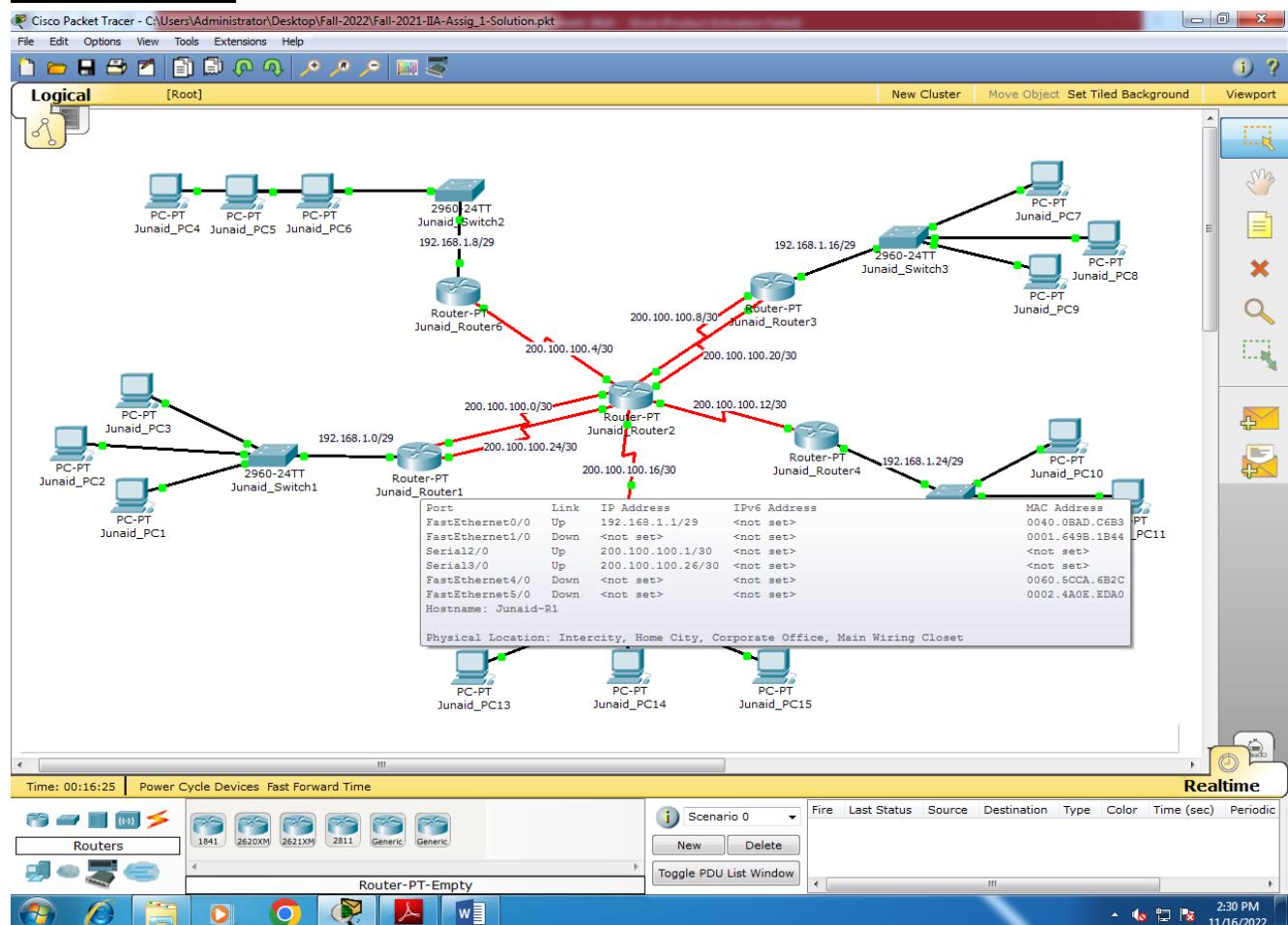
**If you failed to complete the above mentioned requirements (as mentioned) than you will get partial marks.**  
**Take all the snaps neat and clean. Every configuration should be visible. All the snaps should be in sequence (as mentioned).**



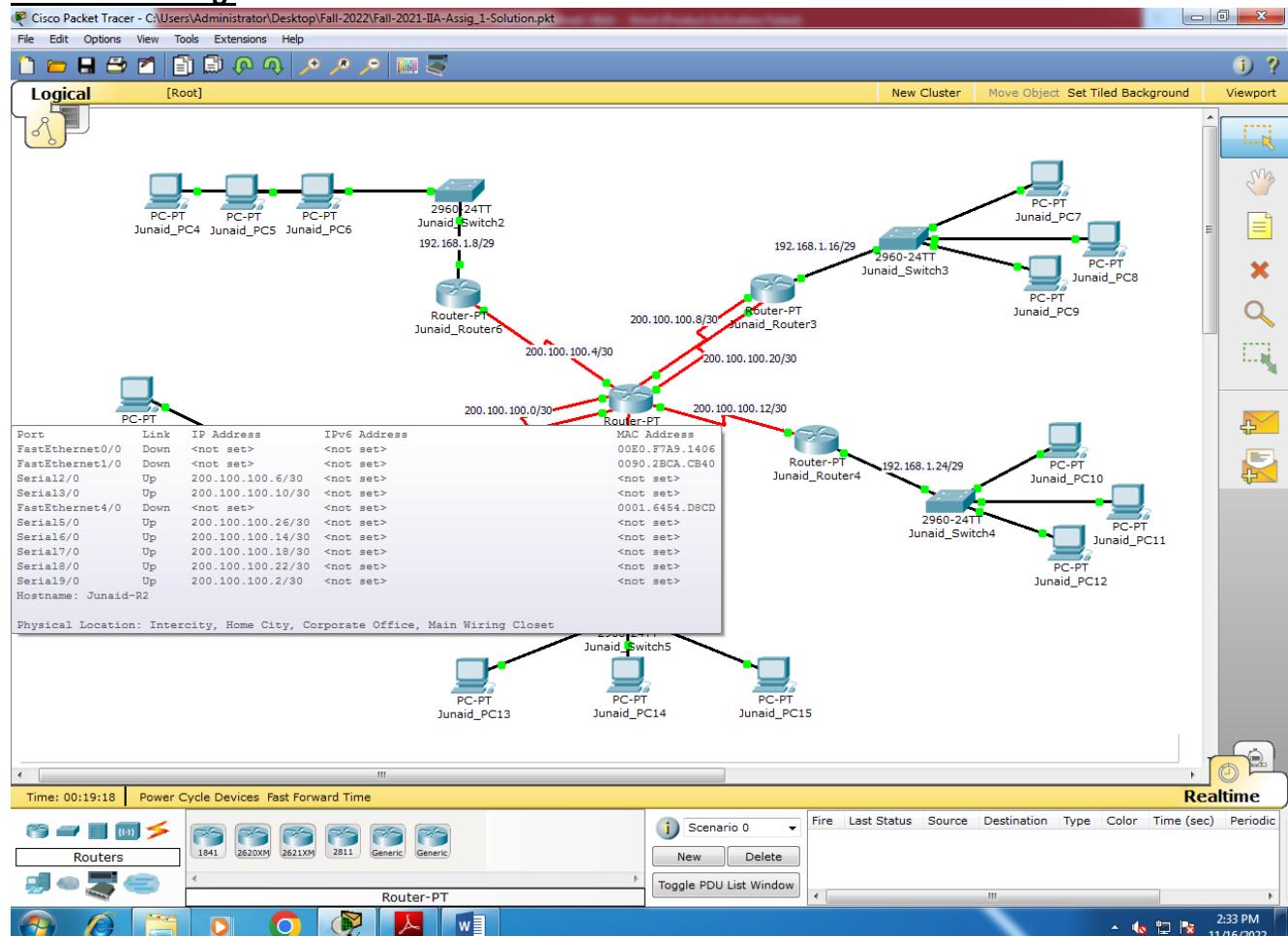
## • Topology:



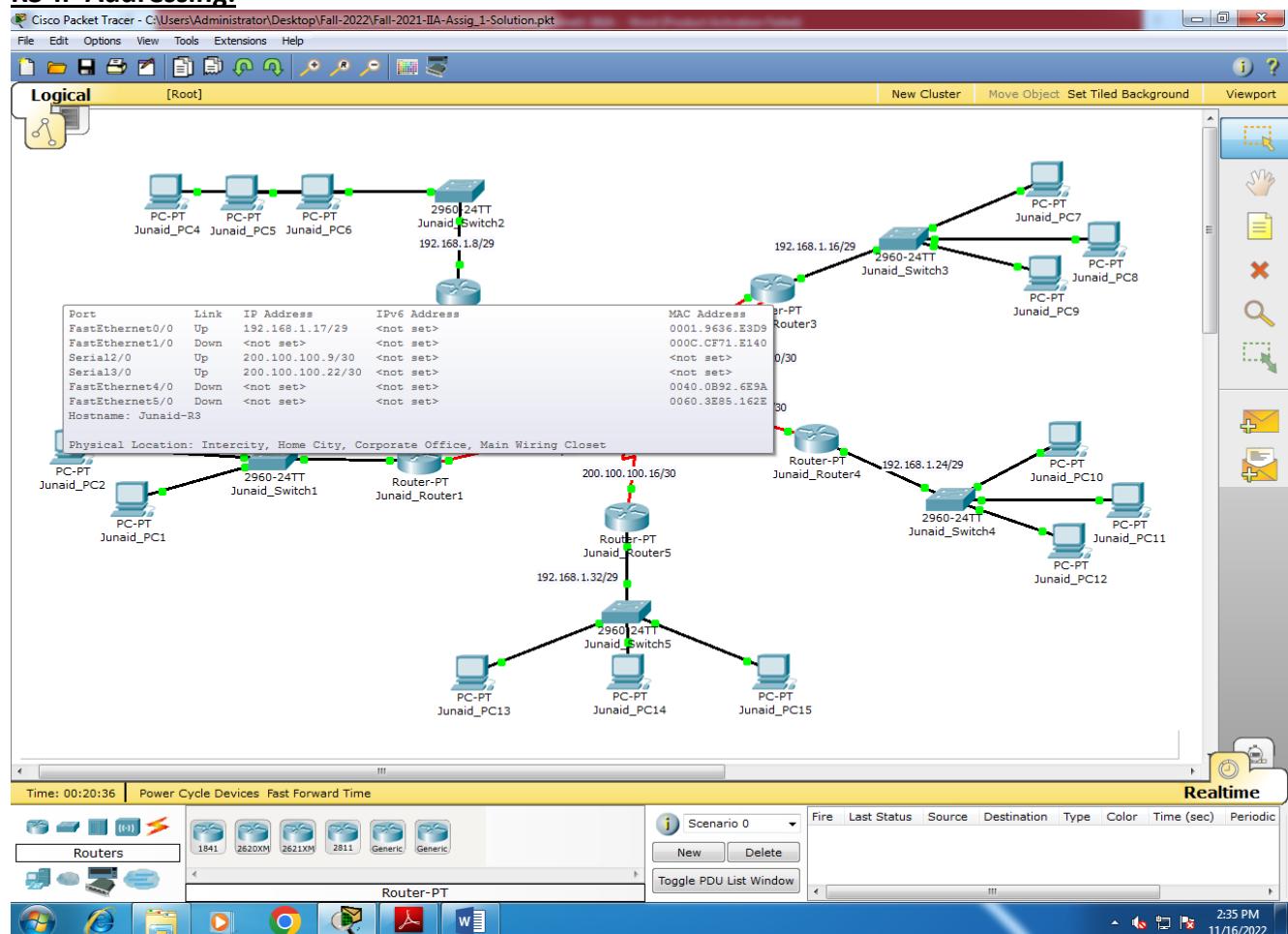
## R1-IP Addressing:



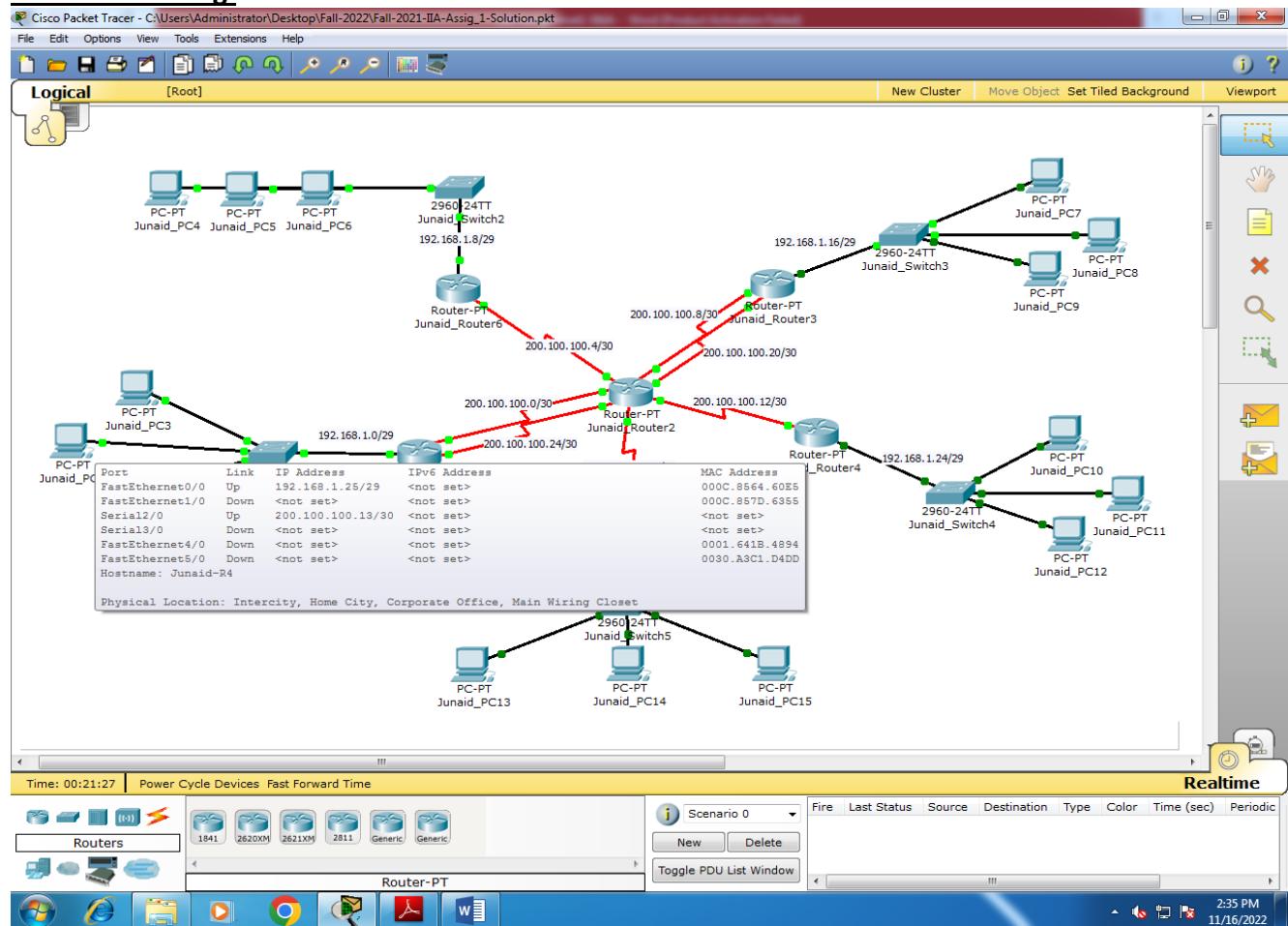
## R2-IP Addressing:



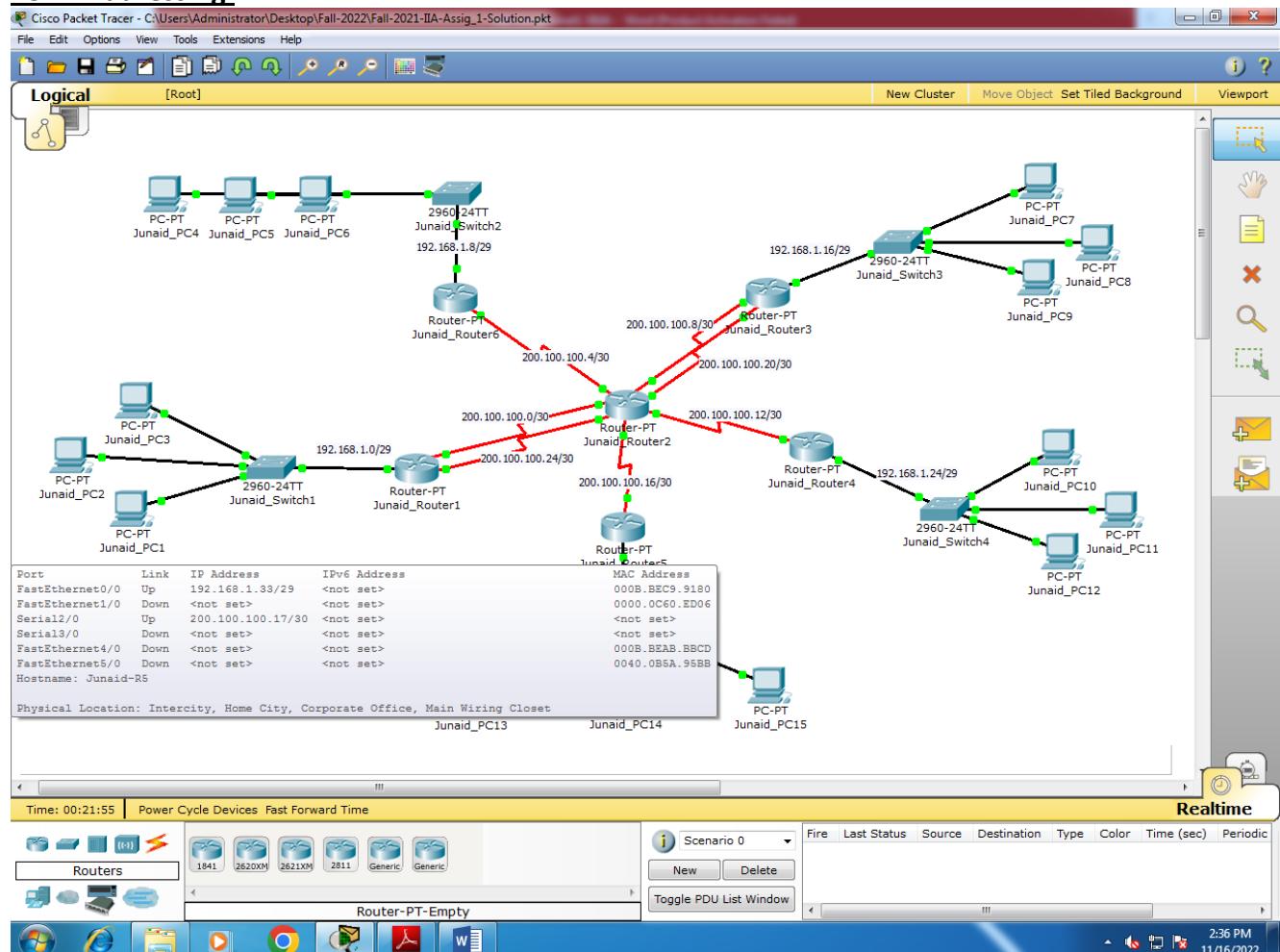
## R3-IP Addressing:



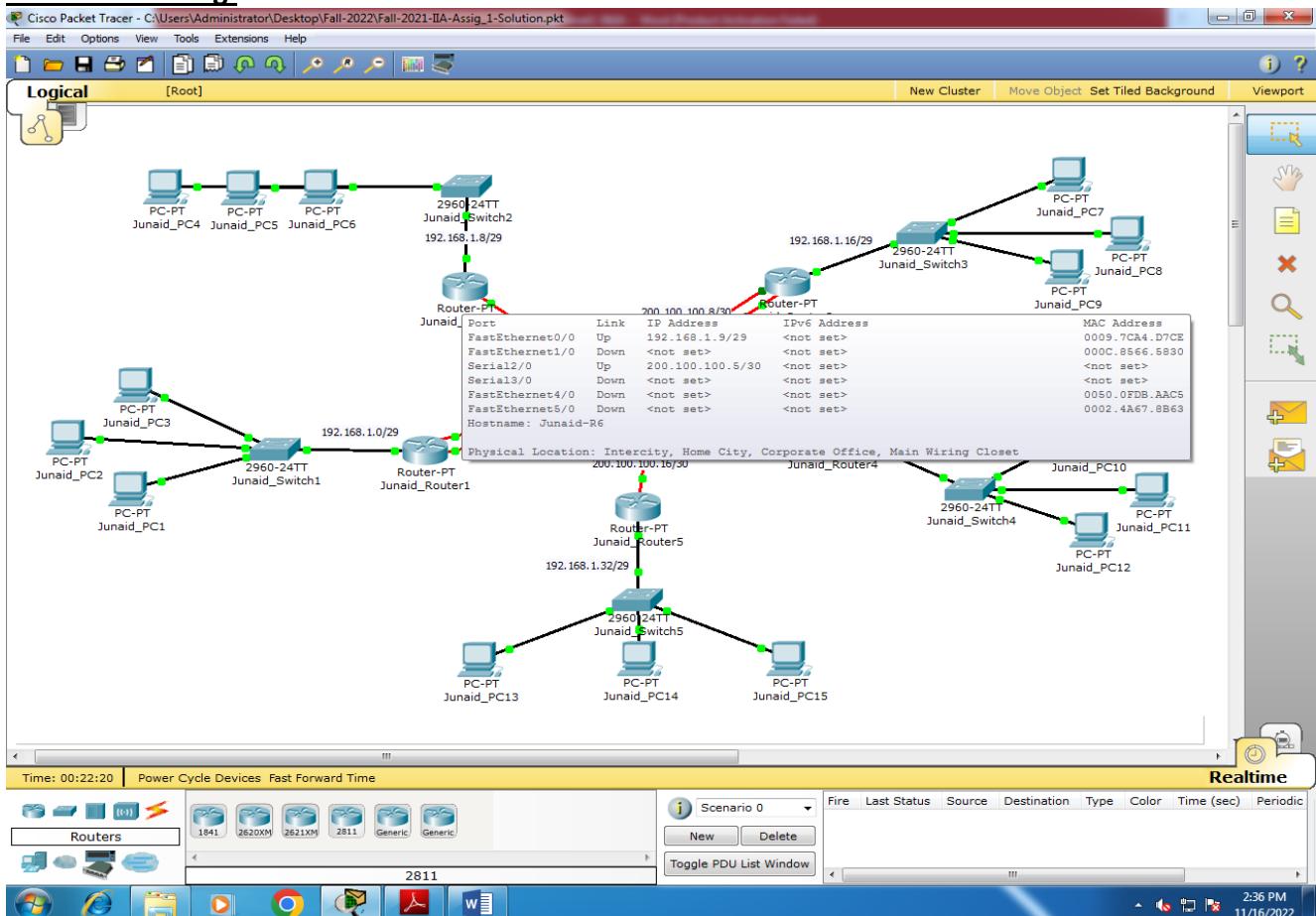
## • R4-IP Addressing:



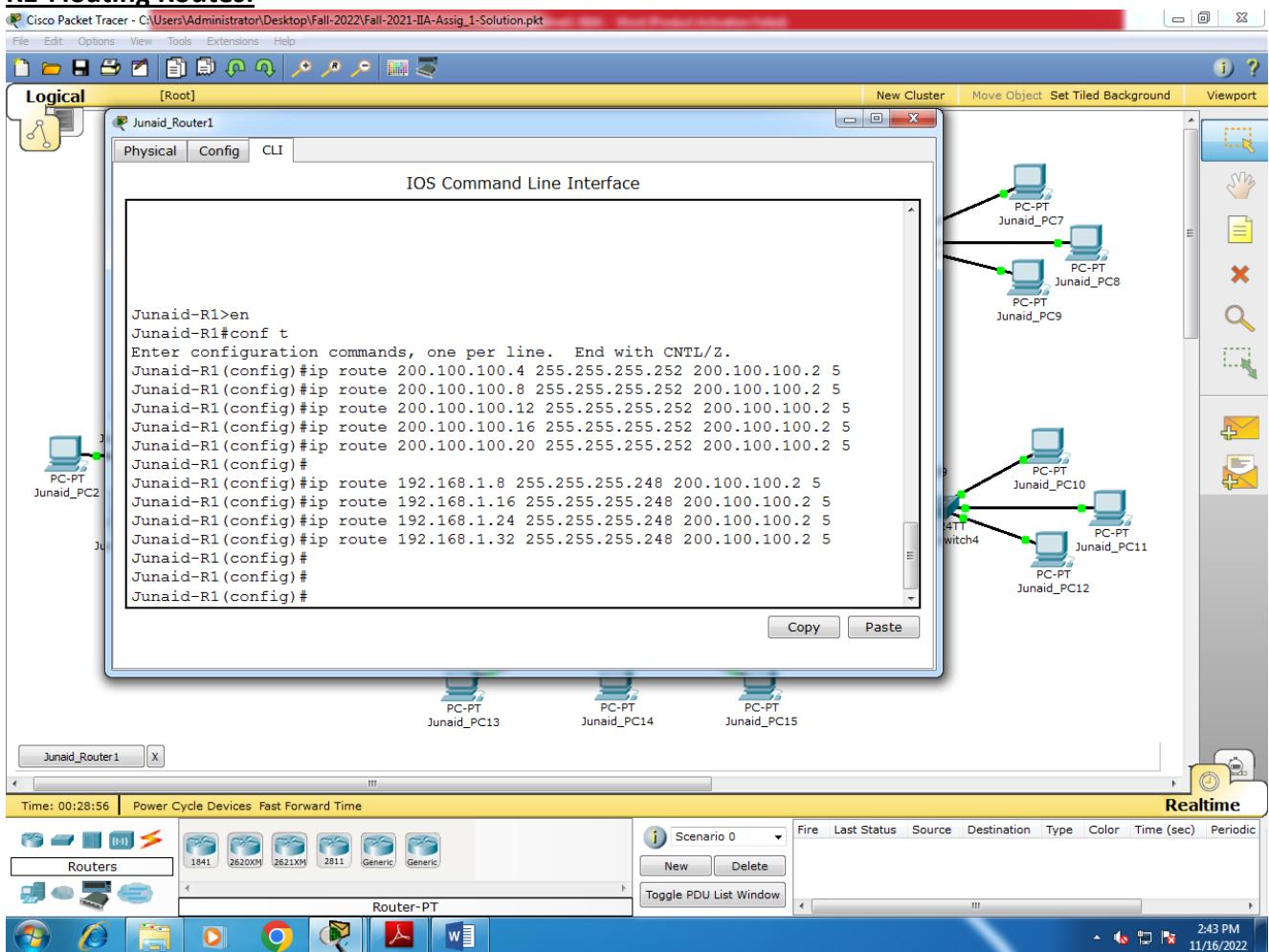
## • R5-IP Addressing:

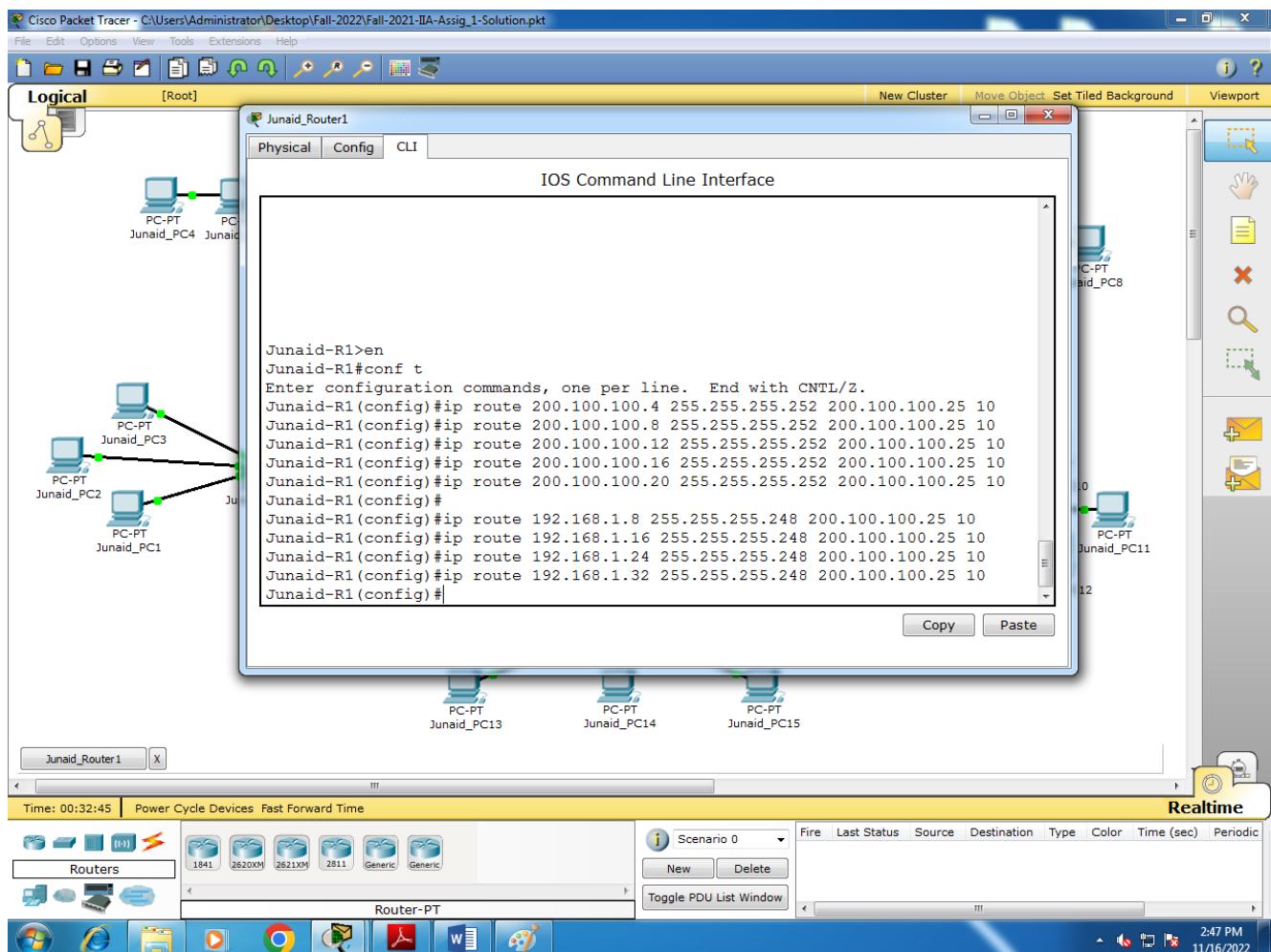


- **R6-IP Addressing:**

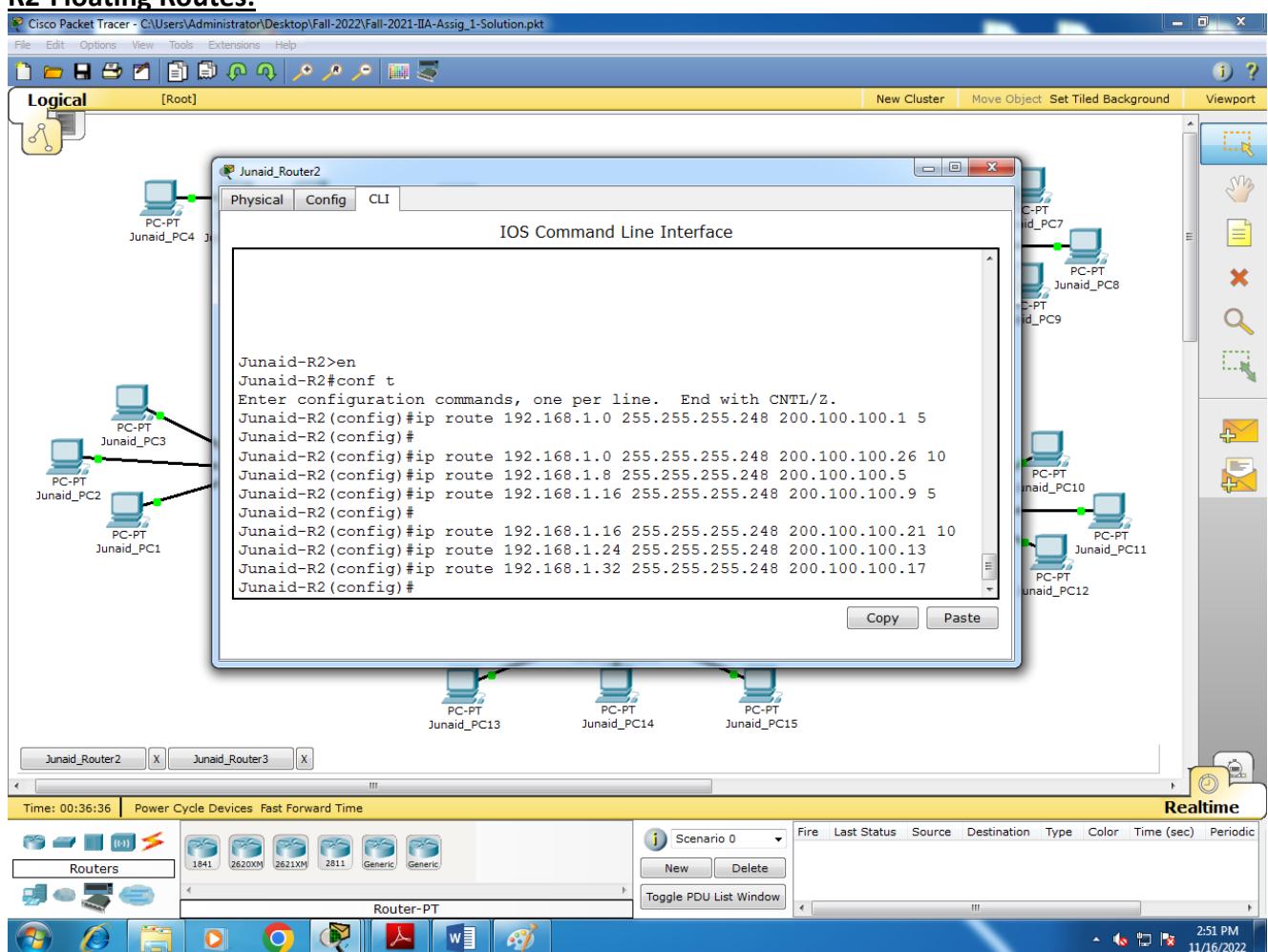


### **• R1-Floating Routes:**

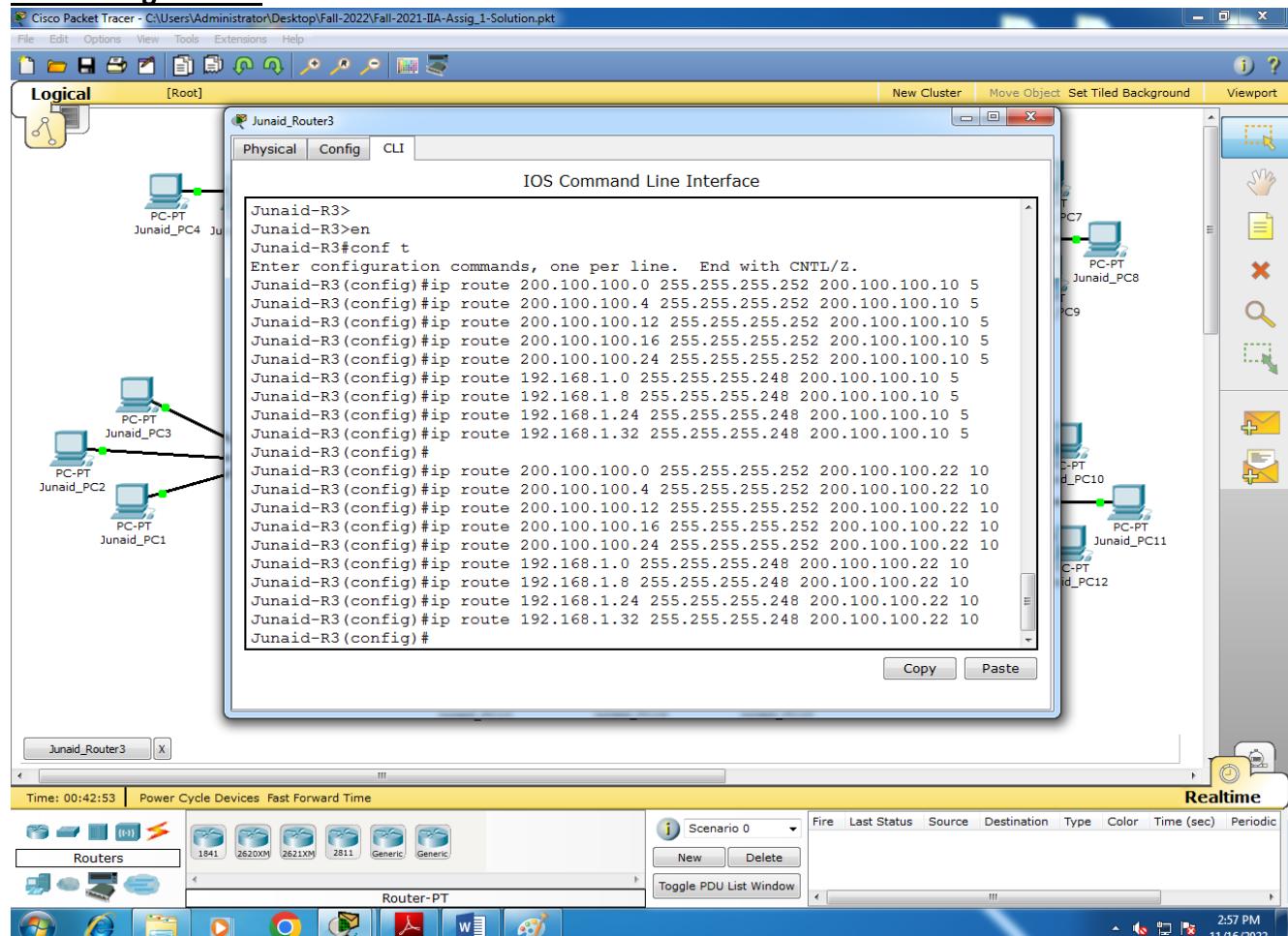




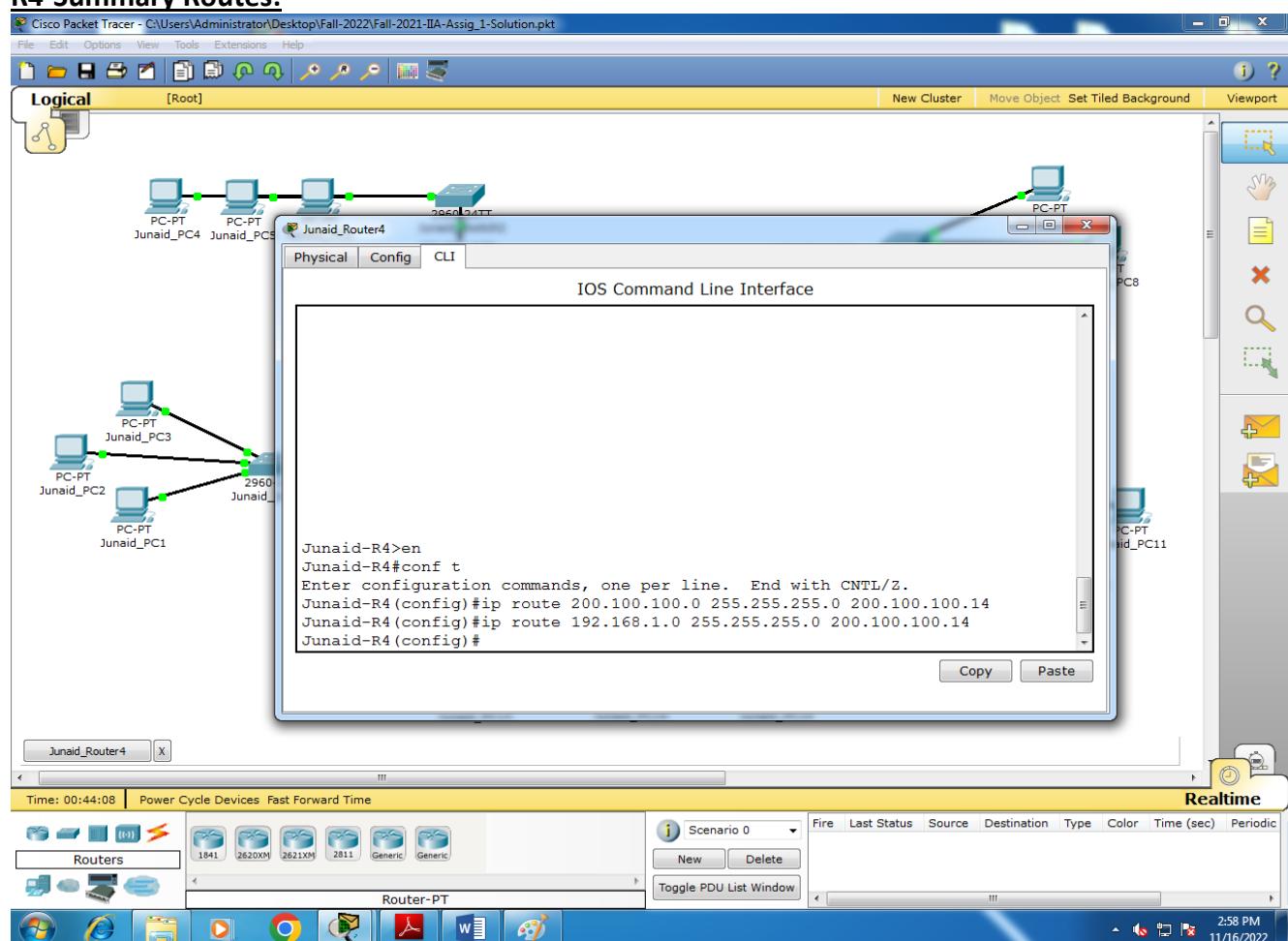
- R2-Floating Routes:**



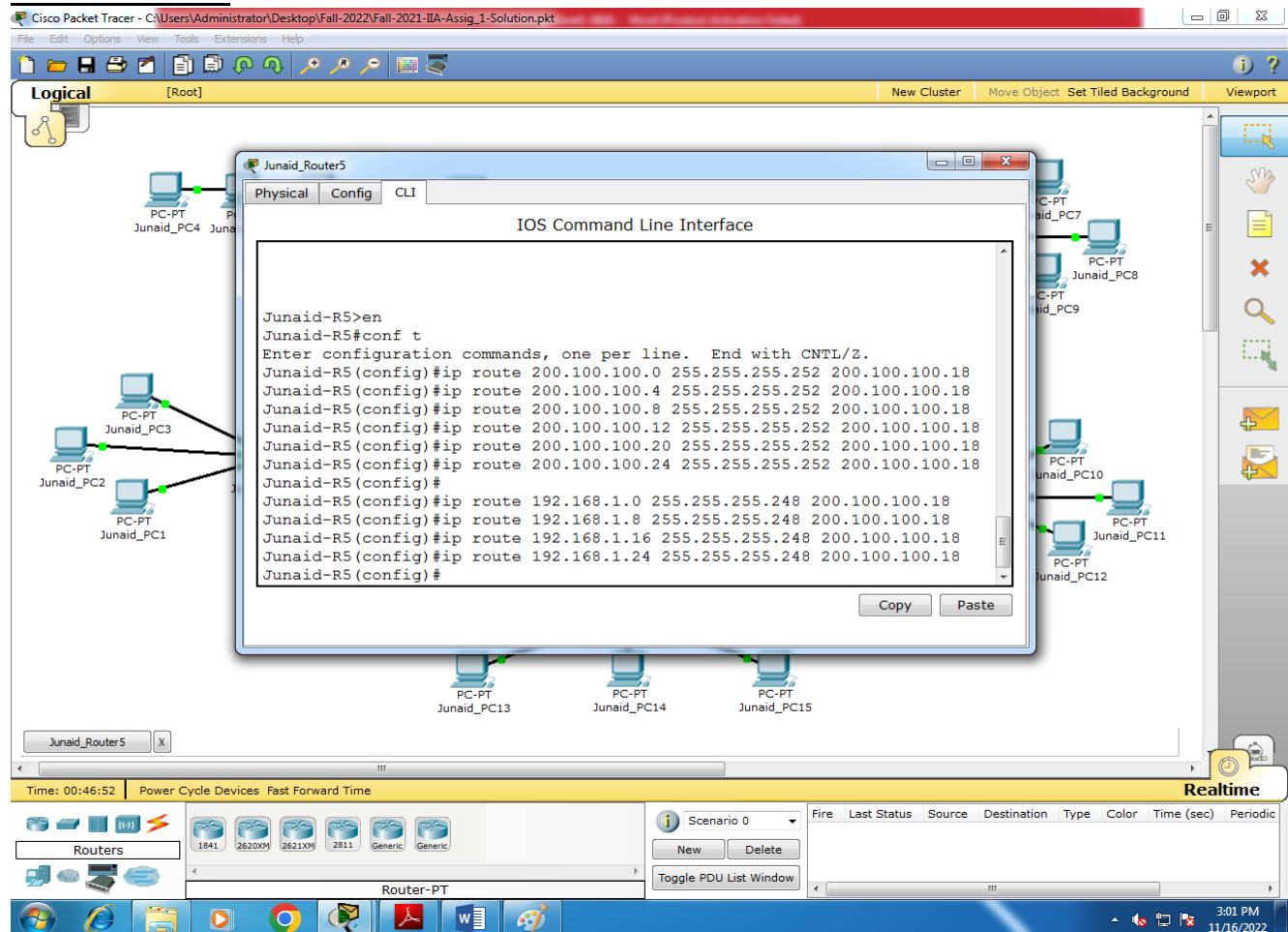
- R3-Floating Routes:**



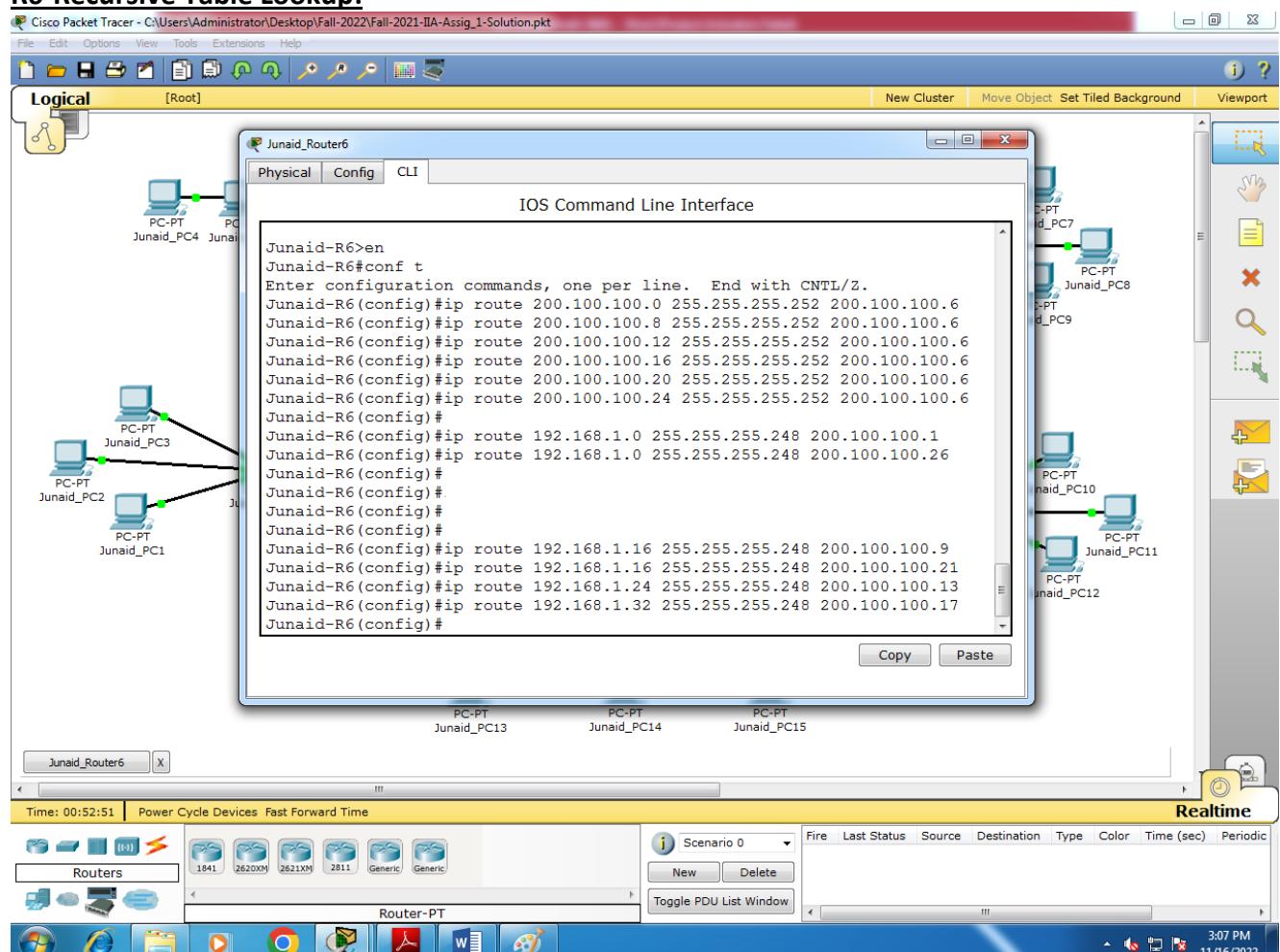
- R4-Summary Routes:**



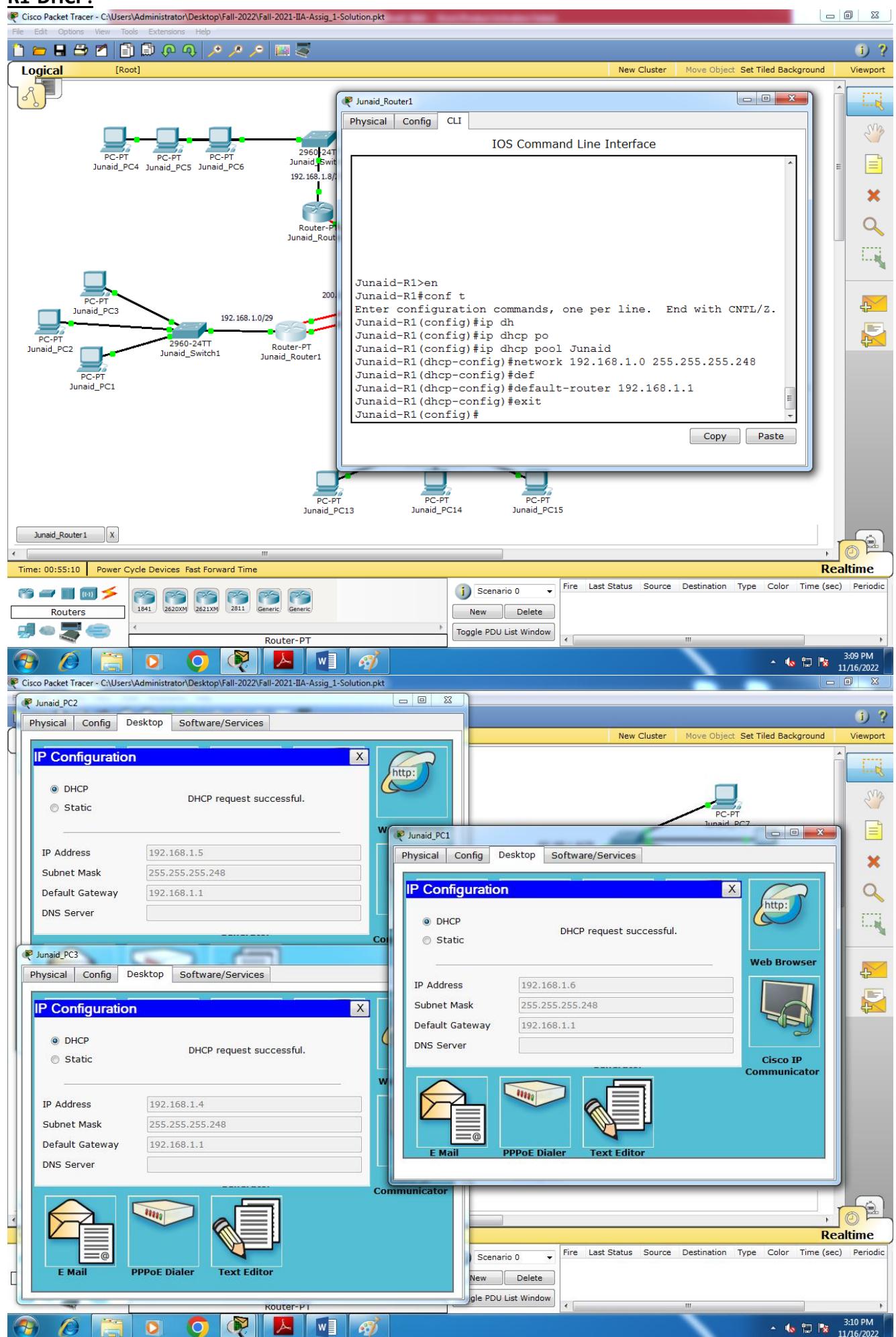
- **R5-Static Routes:**



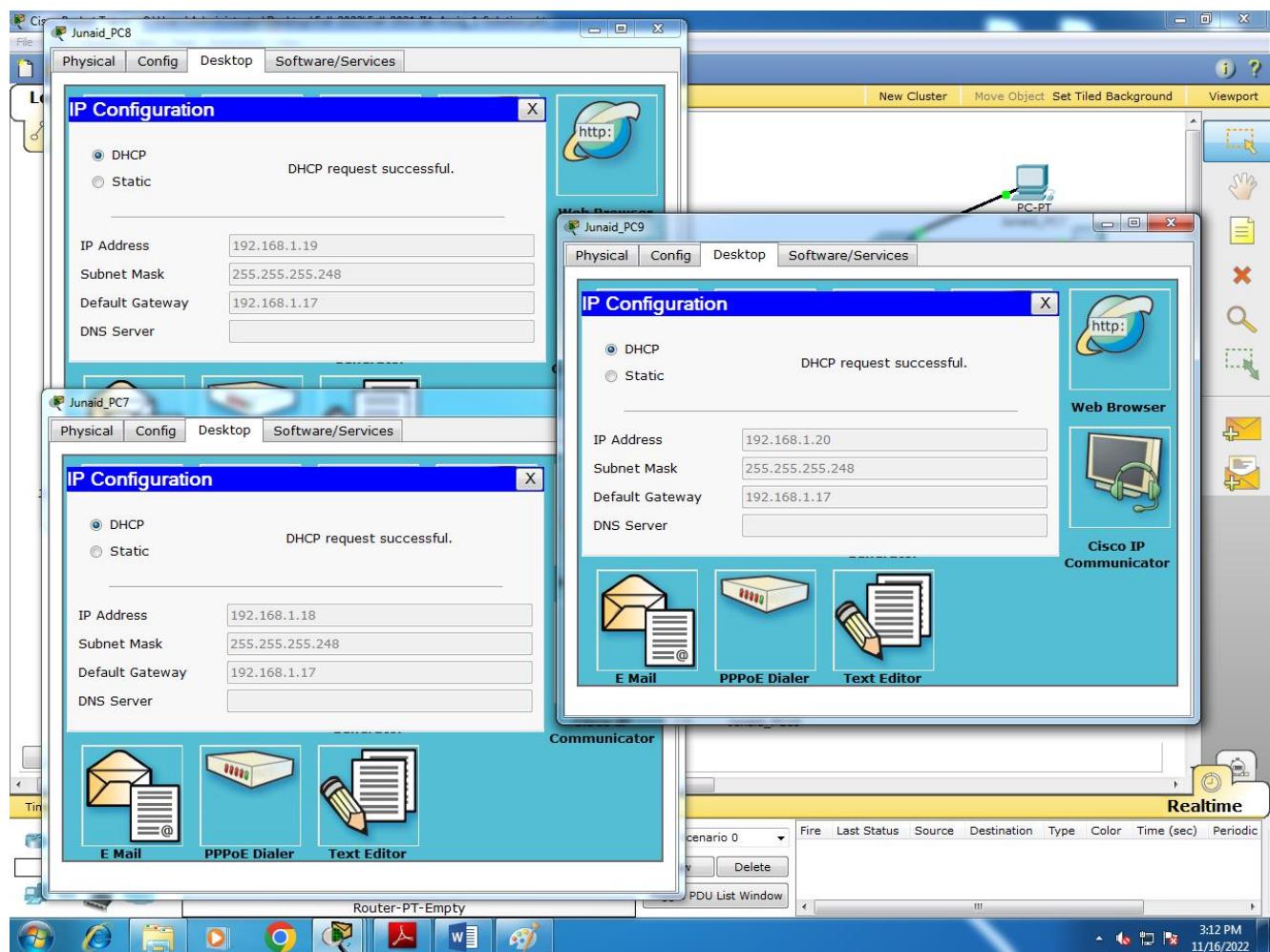
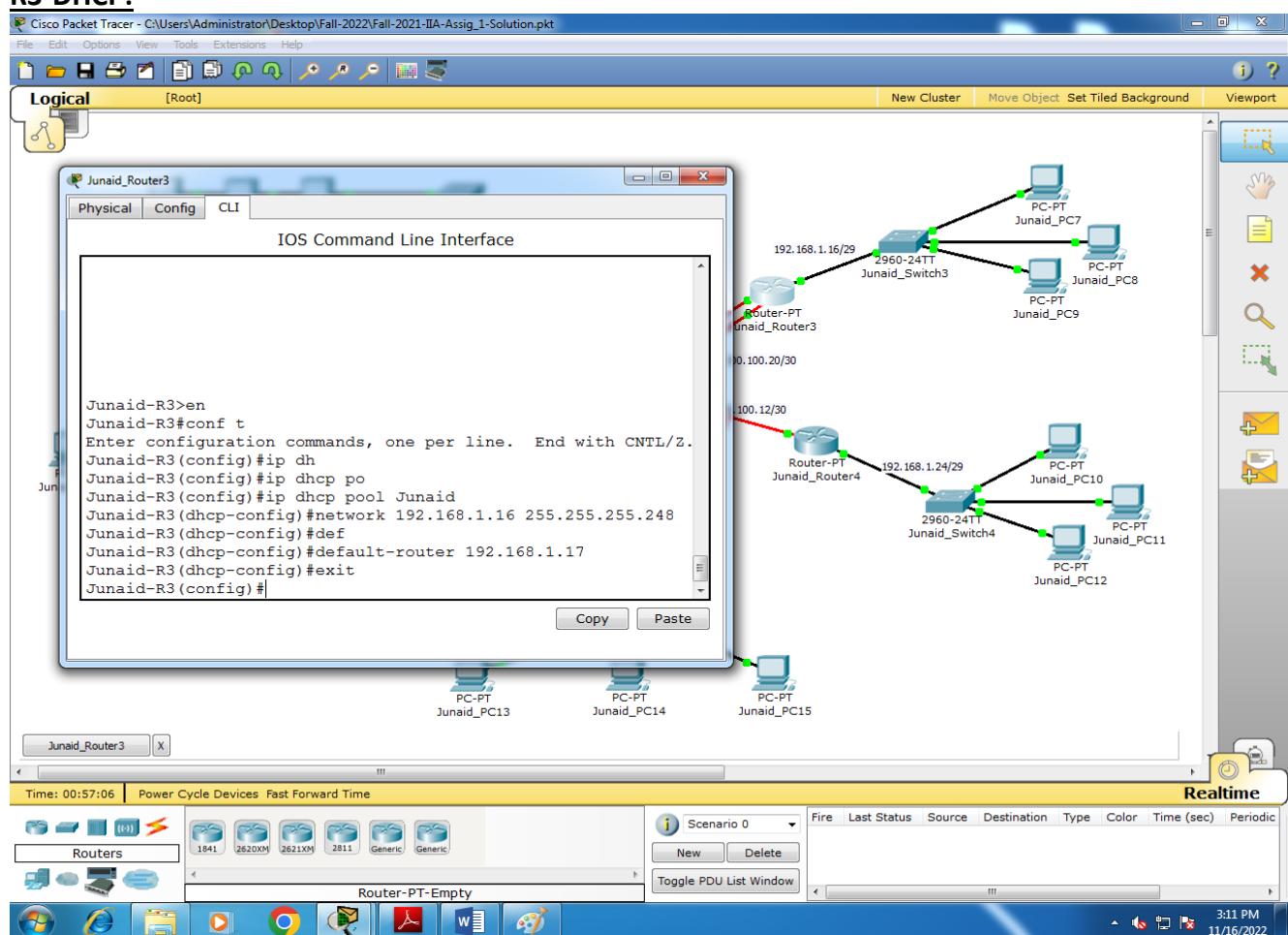
### • R6-Recursive Table Lookup:



## R1-DHCP:



- R3-DHCP:**



- R6-DHCP:**

