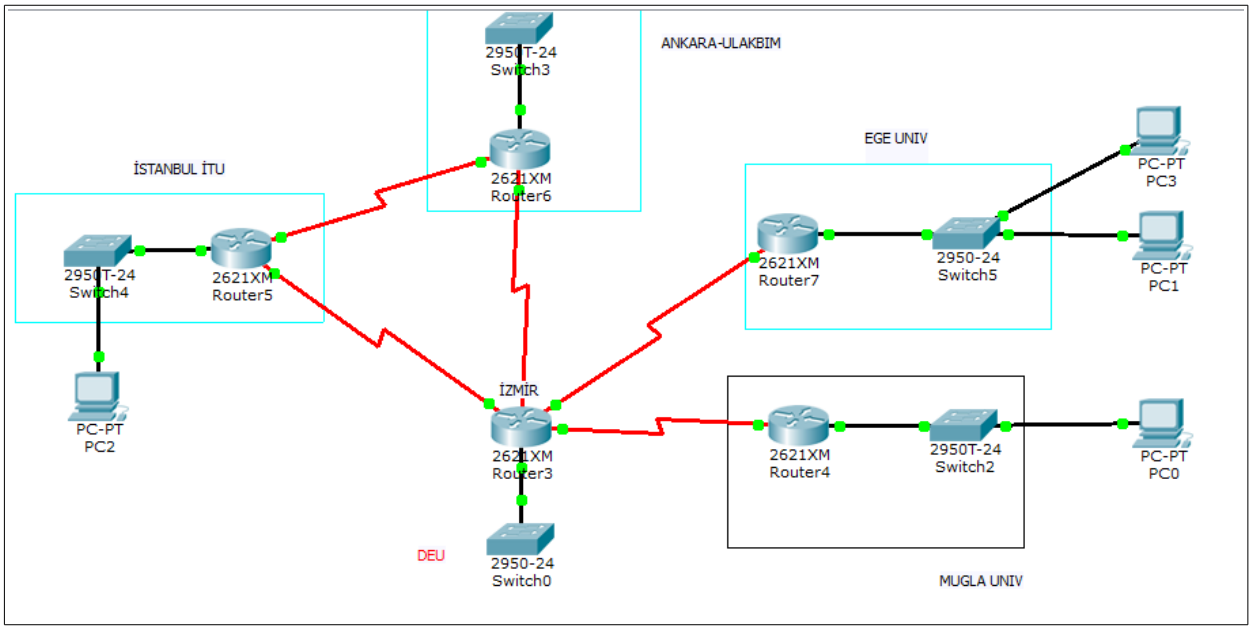
SAMPLE TOPOLOGY

Use the topology below (which is a part of TR-ULAKNET backbone)



The topology should be created in Cisco Packet Tracer, configure these devices with the following conditions:

- Router Used: 2621 XM with module NM-4A/S
- Clock rate 2000000
- Routing protocol: Every router should know all the routes by RIP protocol (version 2)

In real life, these universities have the following IP range and your routers should advertise those Local Area IP networks with RIP protocol:
Mugla University – 194.27.152.0/22
Ege University – 155.223.0.0/16
Dokuz Eylül University – 194.27.172.0/22
İTÜ – 160.75.0.0/16
ULAKBİM – 193.140.83.0/24

Give the following IP addresses to clients
PC1 – 155.223.1.2/16
PC3 – 155.223.1.3/24
PC0 – 194.27.152.3/22
PC2 – 160.75.1.100/16

- **WAN Connections** (1/0 means Serial 1/0 and so on ...)
Assume that you subnet 10.100.1.0/24 for wan connections

a. Form the topology in the packet tracer as in the picture and assure that all links are green (X

points)

b. Assume that you subnet 10.100.1.0/24 for wan connections and subnet it in such a way that you can give two addresses for each side (also 1 for network and 1 for broadcast) Write the IP addresses with subnetmask (shorthand) of each connection (X points)

R4 - 1/0	<->	R3 1/0
….....		….....
R7 - 1/0	<->	R3 1/1
….....		….....
R3 - 1/2	<->	R6 1/0
….....		….....
R3 - 1/3	<->	R5 - 1/0
….....		….....
R5 - 1/1	<->	R6 - 1/1
….....		….....

c. Can PC1 ping PC3? If there is a problem, state it below and solve it in the simulation. (X points)

d. Ensure that all local interfaces (console/vty) are password protected and clients can telnet to routers (X points)

e. Ensure that RIP routing protocol is working and all routers get the routing updates. (X Points)