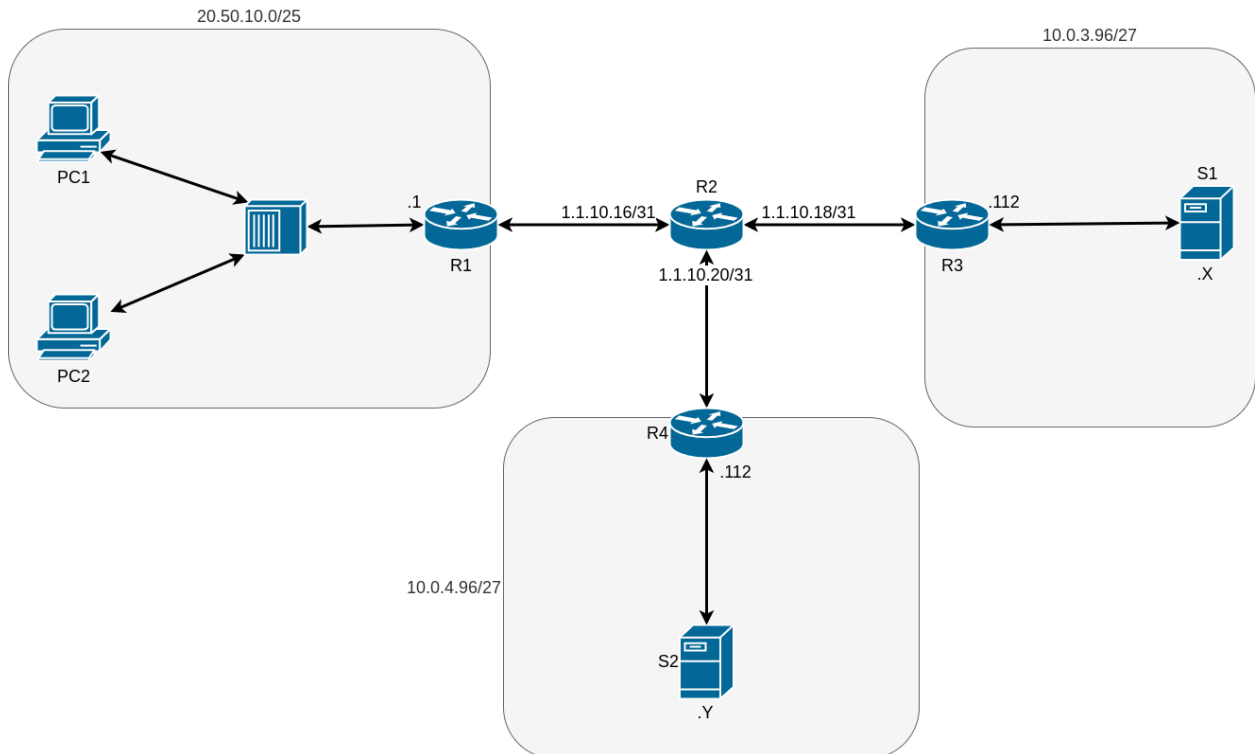


Kathara – First Midterm – E



Given the topology in figure, reproduce it in Kathara. You must use container names and addresses specified in the figure above. Container names should be all in lowercase.

For /31 subnets, the addresses are assigned with the following rule: the lower router number takes the even address, e.g. *r1* takes 1.1.10.16 with respect to *r2*.

The maximum points are **5** and are assigned as follows:

- +0.5 point: lab created with correct lab.conf (PC1, PC2 and R1 belong to the same collision domain). Folders created correctly (one for each node and the shared folder)
- +1 point: configure S1 and S2 ip and routes with iproute2 using startup scripts.
 - Give to S1 the highest address assignable of the subnet.
 - Give to S2 the lowest address assignable of the subnet.
- +1 point: configure PCs in the subnet 20.50.10.0/25 with DHCP. Use R1 as DHCP server. Make it assign IP addresses in the range from .20 to .100.
- +0.5 point: configure IP addresses of R1, R2, R3 and R4 via static /etc/network/interfaces
- +1 point: configure static routes (if any) of R1, R2, R3 and R4 with iproute2 using startup scripts.
- +0.5 point: Using netcat and tcpdump, send "hi_udp" string on UDP port 9000 from PC1 to S1 and capture the communication on a file. The file must be placed inside the "shared" folder and named as "udp.pcap"

- +0.5 point: Using netcat and tcpdump, send "hi_tcp" string on TCP port 8080 from PC2 to S2 and capture the communication on a file. The file must be placed inside the "shared" folder and named as "tcp.pcap"

Restart of all the daemons is required.