

INFOTC 3001 - Computer Network Security

Laboratory # 3 - RIP v1 Routing Protocol

I. Objectives

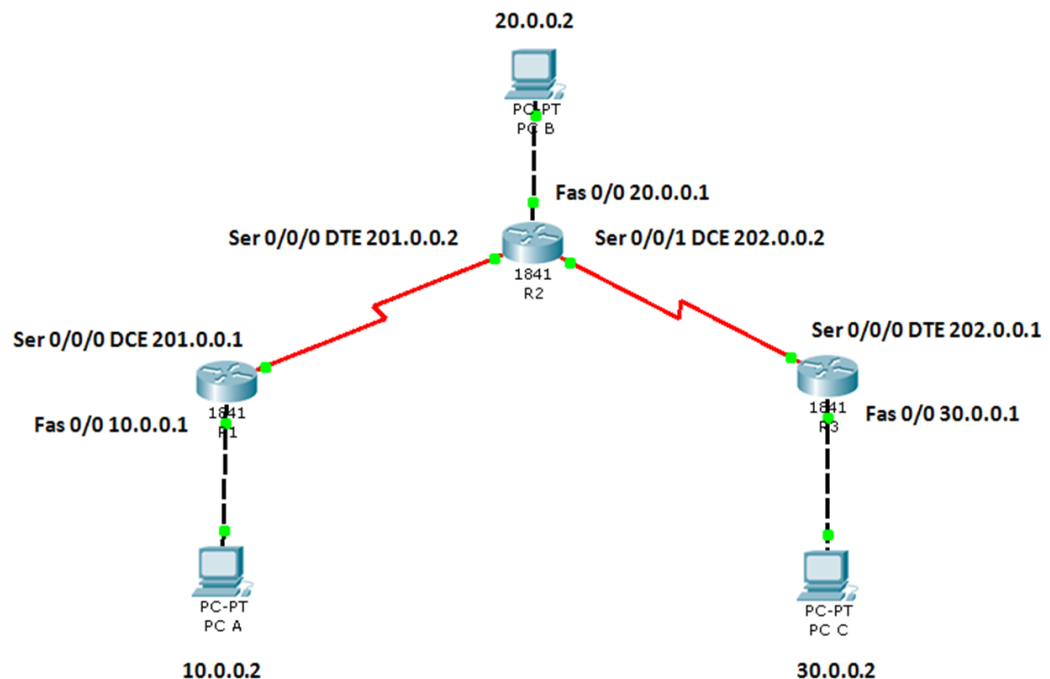
Enabling a network topology by using the RIP v1 *Vector Distance classful* protocol.

II. Material Required

Packet Tracer for Windows/Linux - <https://www.netacad.com>

III. Activity

A. On Packet Tracer design the following Network topology



B. Configure IP addresses on router's interfaces and PCs.

C. Configure RIP v1 routing protocol between routers to allow data transfer.

IV. Review Questions

1. Describe the advantages of RIPv1 over Static Route Configuration.
2. Research the 'Route Loop Problem' and 'Route Poisoning' and provide a short technical description of each of them.
3. Are there some prevention or mitigation for the problems mentioned in Question 2? If so, how are they implemented?
4. Provide a screenshot of your R1 IP table correctly configured.
5. Provide a screenshot of your R2 IP table correctly configured.
6. Provide a screenshot of your R3 IP table correctly configured,
7. Provide a screenshot of PC0 sending successfully packets to PC2, and from PC2 to PC3. Each screenshot should **clearly show** the outputs of the `ifconfig` and `ping` commands.
8. Execute the command `show ip protocols` in R2 and describe relevant information to the RIP v1 configuration protocol.

Grading Outline

1 - 10pts

2 - 15 pts

3 - 15 pts

4 - 5 pts

5 - 5 pts

6 - 5 pts

7 - 30 pts

8 - 15 pts

Total - 100 pts