Network infrastructure designed using Dynamic Routing (Routing Information Protocol Version 2)

Routing Information Protocol Version 2

RIPv2 is a classless, distance vector routing protocol as defined in RFC 1723. Being a classless routing protocol, means, it includes the subnet mask with the network addresses in its routing updates.

As with other classless routing protocols, RIPv2 supports CIDR supernets, VLSM and discontiguous networks.

Due to the deficiencies of RIPv1, RIP version 2 (RIPv2) was developed in 1993 and was equipped with the ability to support subnet information and supports Classless Inter-Domain Routing (CIDR).

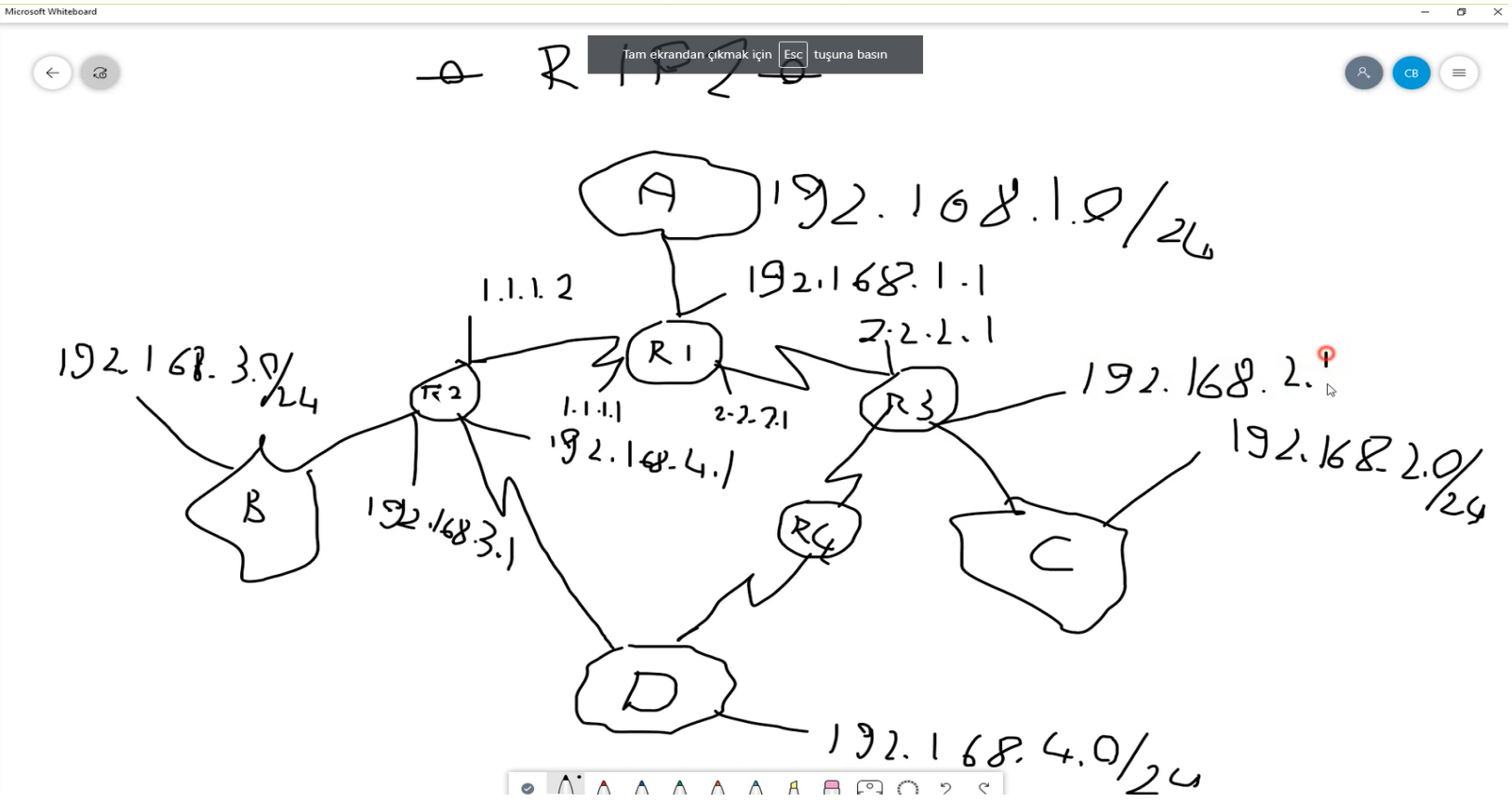
A router that receives routing updates from multiple routers advertising the same classful summary route cannot determine which subnets belong to which summary route. This inability leads to unexpected results including misrouted packets.

Stages

1. Design 4 different networks.(Network A,B,C,D)
2. Set up a end point, that will be a server acts like a cloud or internet.
3. All network infrastructures you have established should communicate with each other and with the end point.

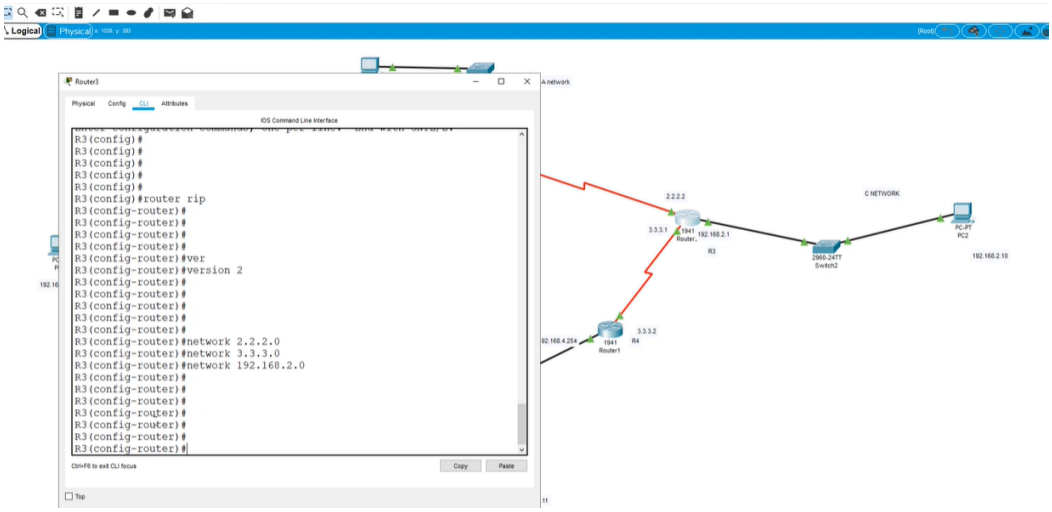
Steps

1. 1- Firstly draw a network topology on white board, that will lead the way you when you open up Packet Tracer.
2. Don't think about my drawing, you can draw better so easily.

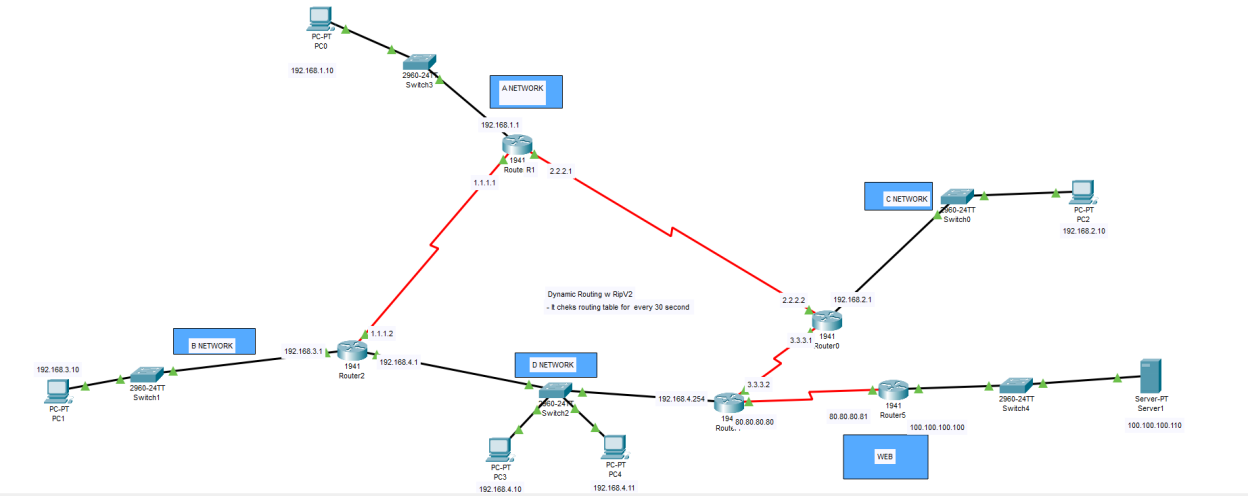


3. After putting in all the routers, switches and Pc's, connect them with the right cables as needed. Don't forget routers should be serial connected with each other, if you need, you can switch them off and place needed modules. You will need 2 serial connection for some of the routers to connect other routers.
4. 

5. Then we start configuration. Don't need to mention general configuration steps, just assign ip addresses as you already write down in white board to all the legs that are connected to the routers and Pc's. You can check the legs if true with No shutdown command for routers. (This command turns the leg green if it's true.)
6. Now when we come up with using RipV2, that makes everything easier, we don't have to solve puzzles… Go to the router that you have to configure with RipV2, commands are below with a simple example.



7. That works clean, don't have to lost in routing and defining other networks legs.



Router 3 CLI screen below when we run **show ip route** command, that shows us to It automatically receives and defines other networks adresses.