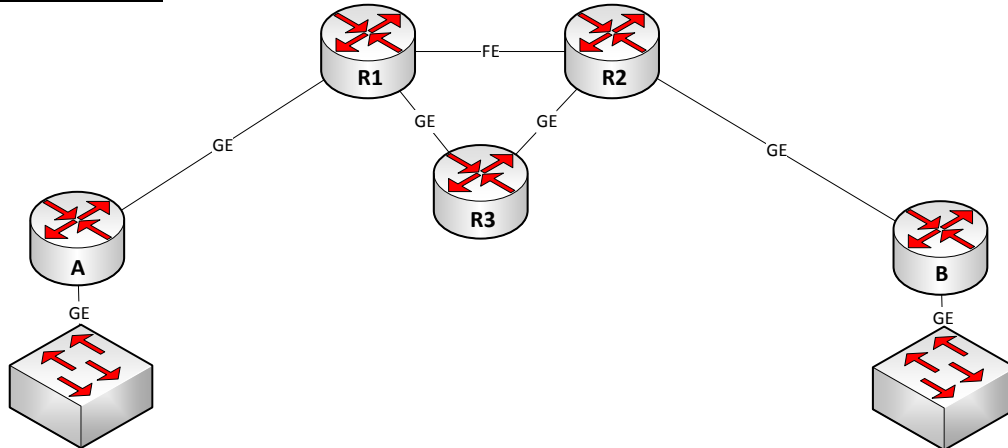# RIP (small)

Lab aims

Helping students develop considerable skills of configuring routers for operation with RIP dynamic routing protocol.

Network scheme

Lab progress

1. Specify IP addresses for all interfaces on all routers. Use addresses from different classful networks for the user networks in A and B routers, but in a way so that the prefix used is smaller than the class one (mask length is greater).
2. Switch on RIPv1 on all routers. Find out about which prefixes routers A and B receive updates.
3. Change the version of RIP from the first to the second one on all routers. Find out about which prefixes routers A and B receive information now.
4. Perform the traffic capturing between the routers and find out which routing updates are appearing between the devices and when it's happening.
5. Add loopback interface to router A and redistribute its prefix to RIP. Check how and when these changes will be visible in the network.
6. Shutdown loopback interface on router A and find out what changes are happening in the RIP topology.
7. Modify the network scheme in a way so that the router A could be disconnected from the network and router R1 would determine it only once the timers have been expired.
8. Switch router A back on and check how the data are transferred between router A and router B once the network has been converged. Think up a more effective route (in your opinion) between A and B. Make up a situation in which the route you proposed would perform worse that the one chosen by RIP.
9. Create two loopback interfaces on router B and assign /24 networks to them. Make sure that they are redistributed into RIP. Ensure that router A has a route for these networks. Adjust the prefix filtration on router A in a way so that only one of these two routes would get in the routing table.
10. Make router B send the route to the network by default. Make sure that router A receives it.

11. Try to redistribute the static route to the super network that has a mask shorter than the class one. Make sure that such route redistribution doesn't function.
12. Adjust RIP in a way so that the data between A and B would be transferred along the route A-R1-R3-R2-B, not A-R1-R2-B. Remember that in this case the network connectivity would subsist even if channel R1-R2 is unavailable. Think up several ways of dealing with this problem.