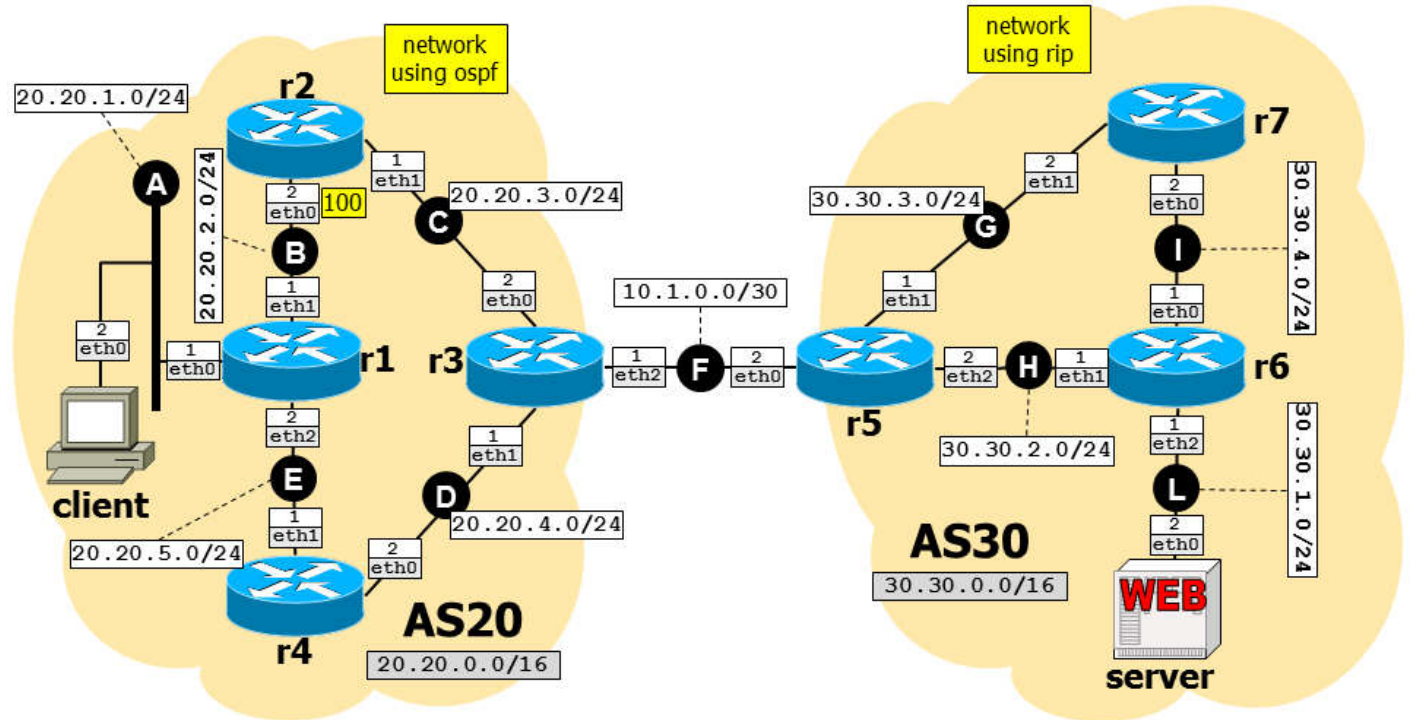


Available time: 60 minutes.



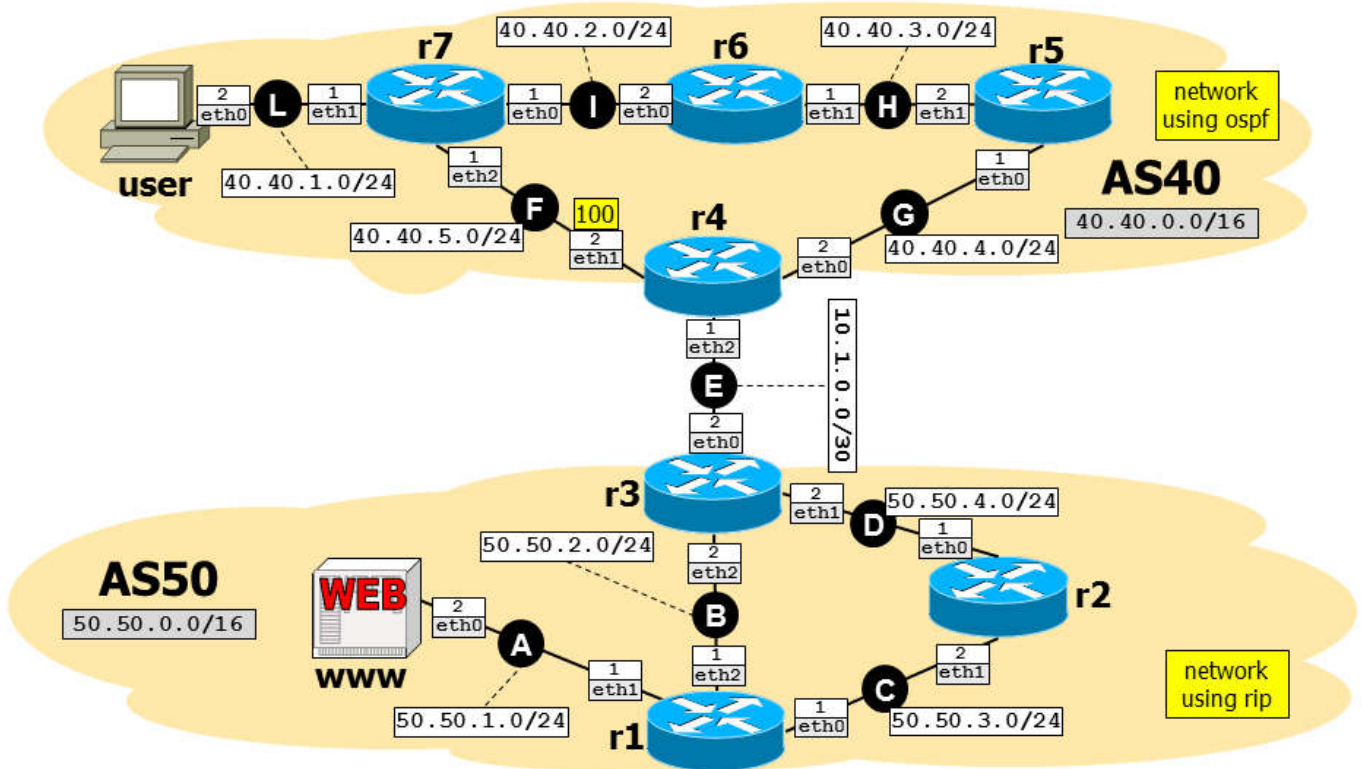
Using Netkit, implement the network depicted in the figure and described below.

- server** is web servers running apache2; it serves a single default page containing “server”.
 - o Remember to set a default route on all network nodes that do *not* act as routers.
- Routing within AS20 is implemented by using OSPF, with the following setup:
 - o All the routers belong to the backbone area.
 - o BGP is redistributed into OSPF (note: enabling redistribution automatically injects into OSPF only routes learned from E-BGP).
 - o Interface eth2 of r2 is assigned the indicated cost.
- Routing within AS30 is implemented by using RIP, with the following setup:
 - o BGP is redistributed into RIP.
- The BGP configuration is as follows:
 - o Routers do not filter any updates.
 - o No routers announce the default route.
 - o AS20’s and AS30’s border routers also announce their own subnet, as an aggregated prefix indicated in the gray box.
- Warning: it may take several minutes (up to 5) for the peerings to be established and for the routing protocols to converge, even if the configuration is correct!

Goals:
 The BGP peering, as well as OSPF and RIP routing must operate correctly.
client must be able to access web page <http://30.30.1.2/> using the **links** web browser.



Available time: 75 minutes.



Using Netkit, implement the network depicted in the figure and described below.

- www** is web servers running apache2; it serves a single default page containing “www”.
 - Remember to set a default route on all network nodes that do *not* act as routers.
- Routing within AS40 is implemented by using OSPF, with the following setup:
 - All the routers belong to the backbone area.
 - BGP is redistributed into OSPF (note: enabling redistribution automatically injects into OSPF only routes learned from E-BGP).
 - Interface eth2 of r4 is assigned the indicated cost.
- Routing within AS50 is implemented by using RIP, with the following setup:
 - BGP is redistributed into RIP.
- The BGP configuration is as follows:
 - Routers do not filter any updates.
 - No routers announce the default route.
 - AS40’s and AS30’s border routers also announce their own subnet, as an aggregated prefix indicated in the gray box.
- Warning: it may take several minutes (up to 5) for the peerings to be established and for the routing protocols to converge, even if the configuration is correct!

Goals:

The BGP peering, as well as OSPF and RIP routing must operate correctly. **client** must be able to access web page <http://50.50.1.2/> using the **links** web browser.