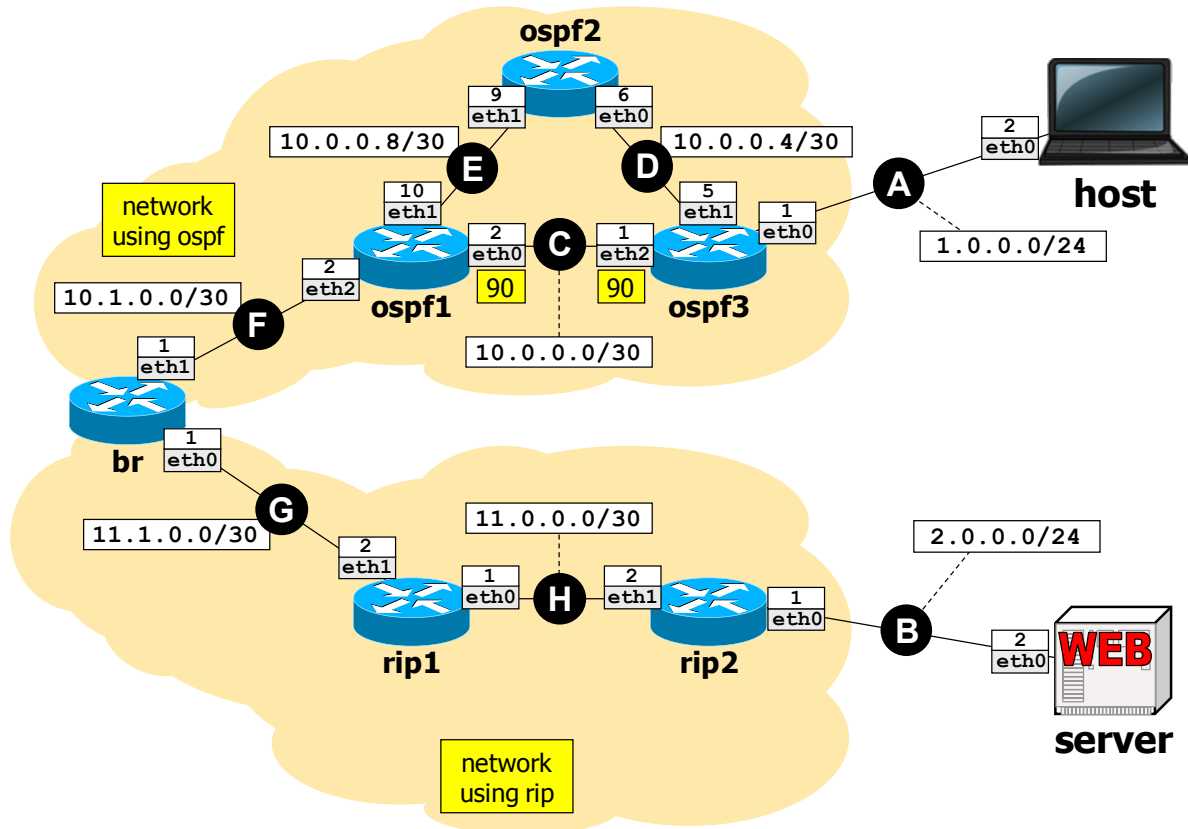





Available time: **60 minutes**.



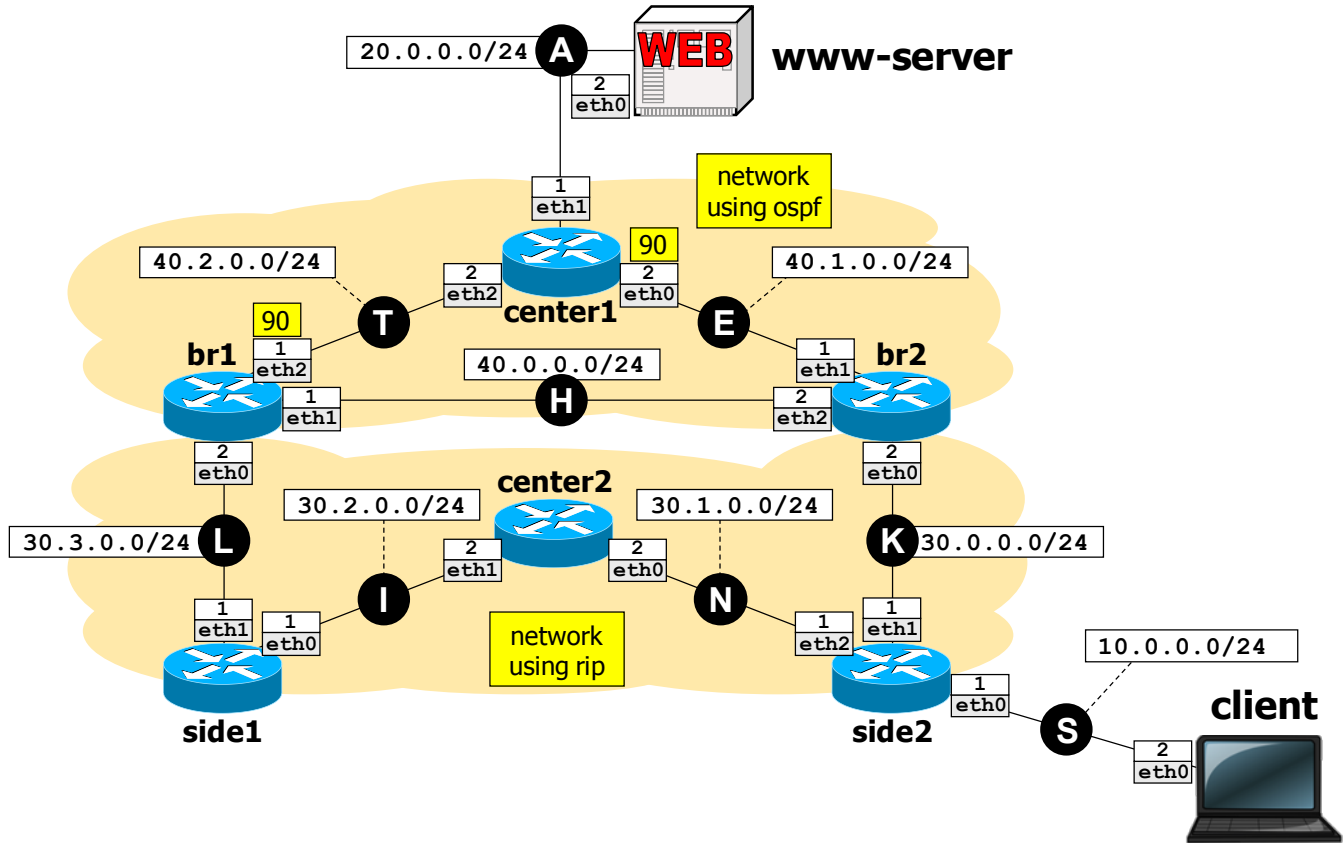
Using Netkit, implement the network depicted in the figure and described below.

- The network consists of two zones (indicated by clouds in the figure) where OSPF and RIP are used as routing protocols, respectively.
- OSPF routers are set up as follows:
 - all OSPF-speaking interfaces belong to area 0.0.0.0.
 - OSPF-speaking interfaces are assigned the specified costs (the default cost is assumed where omitted).
- Router **br** is placed across the two zones and performs the following operations:
 - on the OSPF side, it redistributes all routes learned by RIP;
 - on the RIP side, it does not redistribute any routes: instead, it statically announces only routes 1.0.0.0/24 and 10.0.0.0/8.
- Node **server** runs a Web server implemented using apache, which serves a default Web page available at `http://2.0.0.2/`.

Goal: Node **host** must be able to access the Web page available at `http://2.0.0.2/`. Moreover, verify that the routing path computed between **host** and **server** uses links **E** and **D** in both directions.

ICN – Examination date: 20 Nov 2015 – Round **1** – “Up arrow” 

Available time: **60 minutes**.



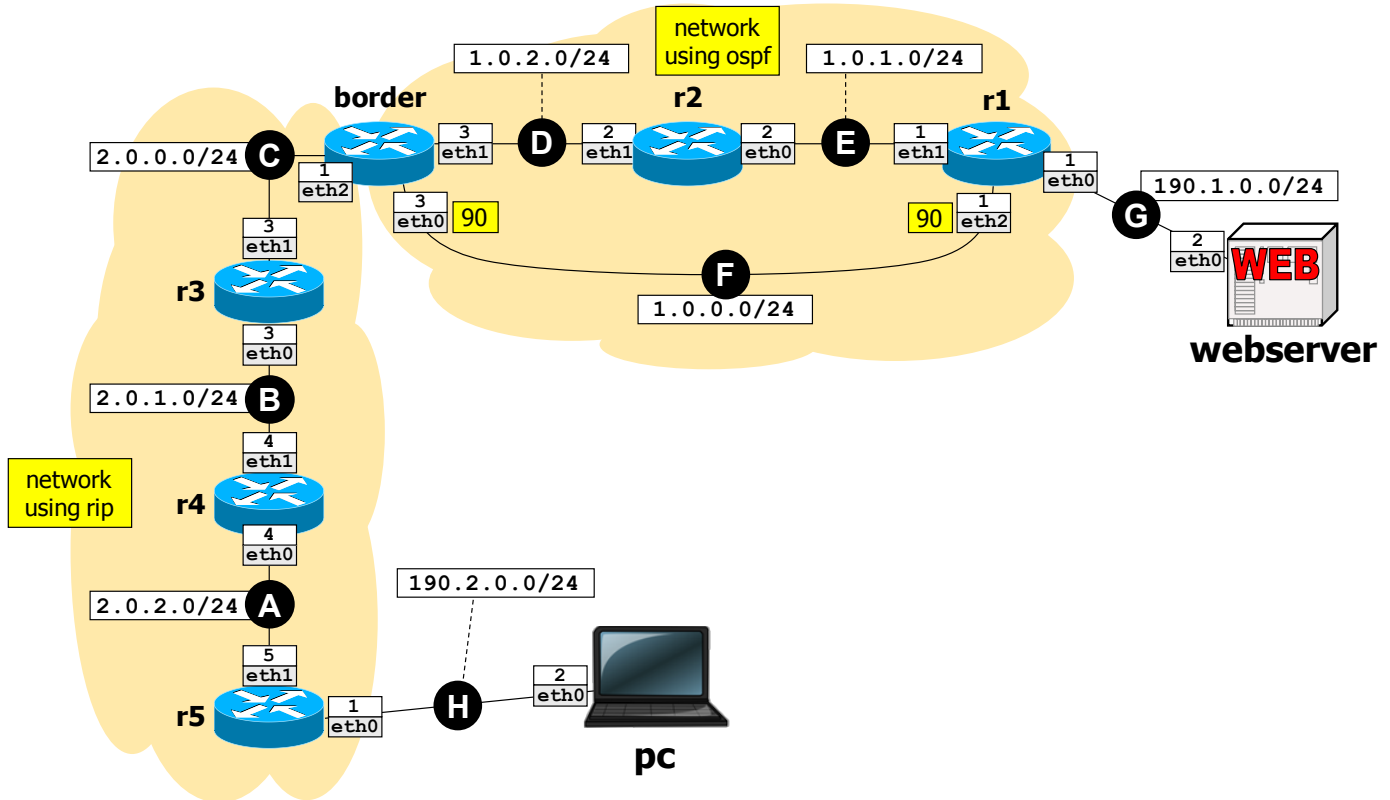
Using Netkit, implement the network depicted in the figure and described below.

- The network consists of two zones (indicated by clouds in the figure) where OSPF and RIP are used as routing protocols, respectively.
- OSPF routers are set up as follows:
 - all OSPF-speaking interfaces belong to area 0.0.0.0.
 - OSPF-speaking interfaces are assigned the specified costs (the default cost is assumed where omitted).
- Routers **br1** and **br2** are placed across the two zones and perform the following operations:
 - on the OSPF side, they both redistribute all routes learned by RIP;
 - on the RIP side, **br2** does not redistribute any routes: instead it statically announces only the default route 0.0.0.0/0;
 - on the RIP side, **br1** does not redistribute any routes: instead it statically announces only route 20.0.0.0/24.
- Node **www-server** runs a Web server implemented using apache, which serves a default Web page available at `http://20.0.0.2/`.

Goal: Node **client** must be able to access the Web page available at `http://20.0.0.2/`. Moreover, verify that the routing path computed from **client** to **www-server** uses links **L** and **H**, and the path from **www-server** to **client** uses link **T**.



Available time: 60 minutes.



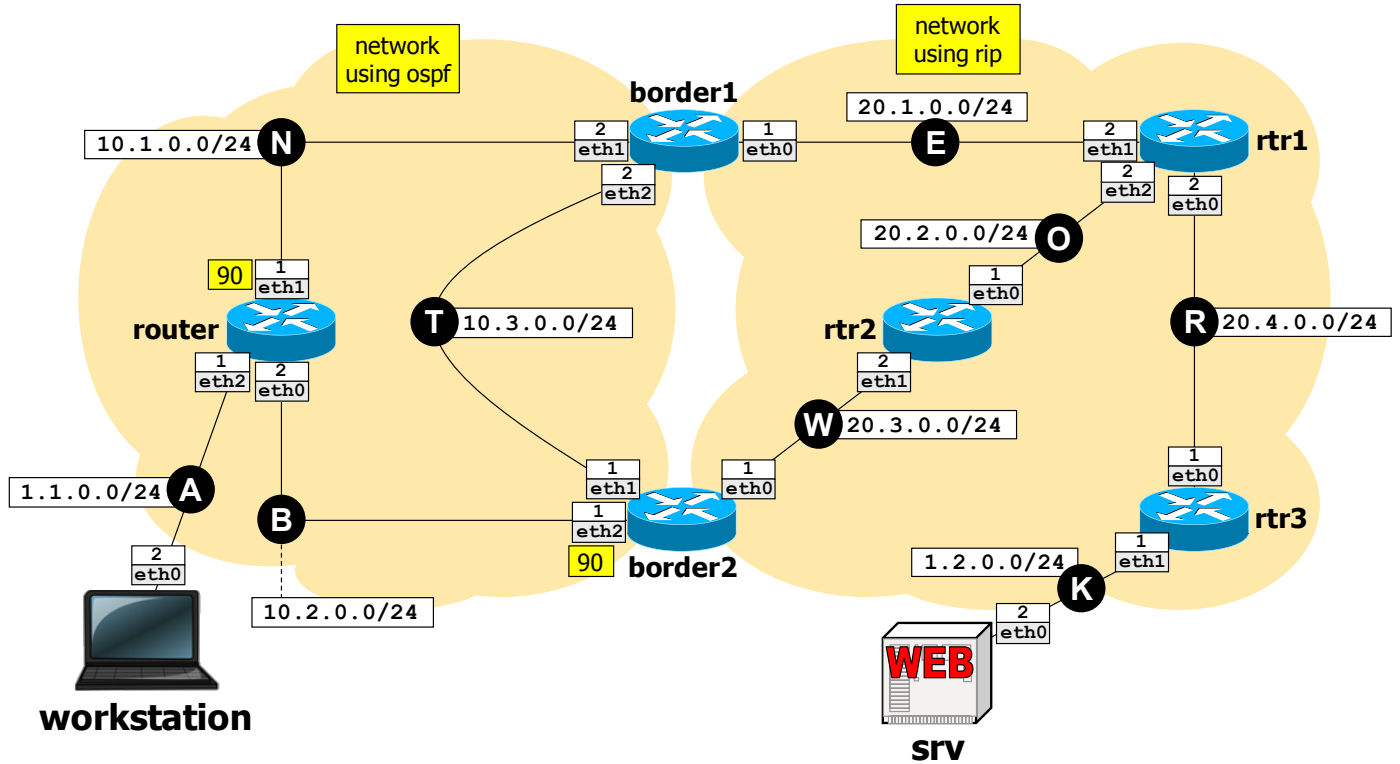
Using Netkit, implement the network depicted in the figure and described below.

- The network consists of two zones (indicated by clouds in the figure) where RIP and OSPF are used as routing protocols, respectively.
- OSPF routers are set up as follows:
 - all OSPF-speaking interfaces belong to area 0.0.0.0.
 - OSPF-speaking interfaces are assigned the specified costs (the default cost is assumed where omitted).
- Router **border** is placed across the two zones and performs the following operations:
 - on the OSPF side, it redistributes all routes learned by RIP;
 - on the RIP side, it does not redistribute any routes: instead, it statically announces only routes 190.1.0.0/24 and 1.0.0.0/16.
- Node **webservice** runs a Web server implemented using apache, which serves a default Web page available at `http://190.1.0.2/`.

Goal: Node **pc** must be able to access the Web page available at `http://190.1.0.2/`. Moreover, verify that the routing path computed between **pc** and **webservice** uses links **D** and **E** in both directions.



Available time: **60 minutes**.



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

- The network consists of two zones (indicated by clouds in the figure) where OSPF and RIP are used as routing protocols, respectively.
- OSPF routers are set up as follows:
 - all OSPF-speaking interfaces belong to area 0.0.0.0.
 - OSPF-speaking interfaces are assigned the specified costs (the default cost is assumed where omitted).
- Routers **border1** and **border2** are placed across the two zones and perform the following operations:
 - on the OSPF side, they both redistribute all routes learned by RIP;
 - on the RIP side, **border1** does not redistribute any routes: instead it statically announces only the default route 0.0.0.0/0;
 - on the RIP side, **border2** does not redistribute any routes: instead it statically announces only route 1.1.0.0/24.
- Node **srv** a Web server implemented using apache, which serves a default Web page available at <http://1.2.0.2/>.

Goal: Node **workstation** must be able to access the Web page available at <http://1.2.0.2/>. Moreover, verify that the routing path computed from **workstation** to **srv** uses link **B**, and the path from **srv** to **workstation** uses links **W** and **T**.