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

- \( r_1, r_2, r_3, \) and \( r_4 \) are routers running OSPF.
  - All routers belong to the area 0.0.0.0.
  - Interface eth0 of router \( r_4 \) and interface eth1 of router \( r_3 \) have OSPF cost 100.
- \( r_5, r_6, r_7, \) and \( r_8 \) are routers running RIP.
- Router \( r_6 \) redistributes the route 40.0.0.0/16 into RIP, as well as every directly connected route.
- Router \( r_1 \) redistributes the route 50.0.0.0/16 into OSPF, as well as every directly connected route.
  - Hint: to redistribute static routes into OSPF use the command `redistribute kernel`. Such a command redistributes into OSPF each static route installed in the kernel routing table.

**Goals:**

- Every IP address in the network must be reachable from any router.
- The traffic generated from \( r_3 \) and directed to \( r_6 \) must pass through routers \( r_4, r_2 \) and \( r_1 \).
Using Netkit, implement the network depicted in the figure and described below.

- r1, r2, r3, and r4 are routers running RIP.
- r5, r6, r7, and r8 are routers running OSPF.
  - All routers belong to the area 0.0.0.0.
  - Interface eth0 of router r8 and interface eth0 of router r7 have OSPF cost 100.
- Router r2 redistributes the route 20.0.0.0/16 into RIP, as well as every directly connected route.
- Router r5 redistributes the route 30.0.0.0/16 into OSPF, as well as every directly connected route.
  - Hint: to redistribute static routes into OSPF use the command `redistribute kernel`. Such a command redistributes into OSPF each static route installed in the kernel routing table.

**Goals:**
Every IP address in the network must be reachable from any router.
The traffic generated from r7 and directed to r2 must pass through routers r8, r6, and r5.