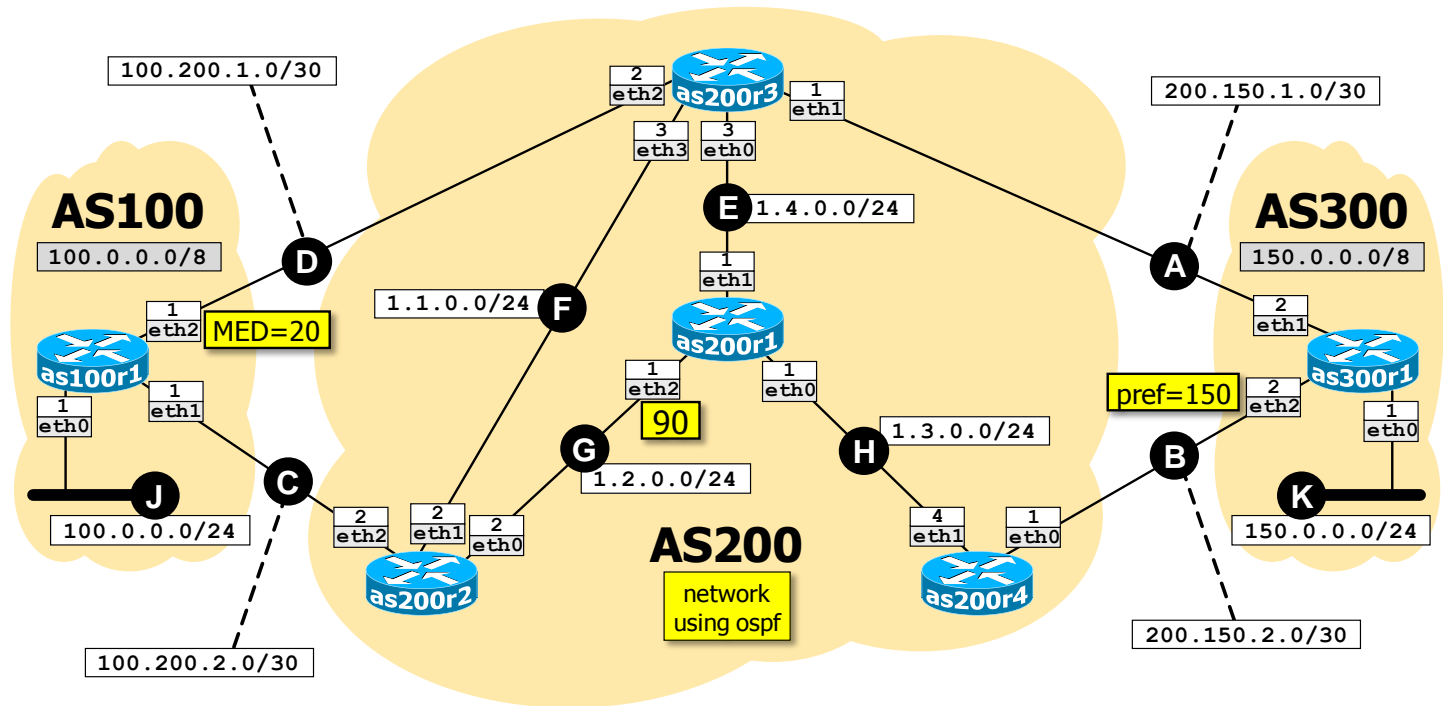




Available time: **80 minutes**.



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

- Routing within AS200 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 `as200r1` is assigned the indicated cost.
- The BGP configuration is as follows:
 - Border routers within AS200 establish I-BGP peerings with each other (remember to establish the peerings between interfaces that are consistent with the internal routing of AS200).
 - All peering LANs are announced in BGP. Routers do not filter any updates. No routers announce the default route.
 - `as100r1` sets the indicated Multi Exit Discriminator (MED) value on outgoing updates.
 - `as300r1` sets the indicated local preference value on incoming updates.
- 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: All BGP peerings as well as OSPF routing must operate correctly.
 Packets from `as300r1` to `100.0.0.1` must traverse routers `as200r4`, `as200r1`, `as200r3`, and `as200r2`.
 Internal routers of AS200 do not need to be visible from outside the AS.