OSPF elect a Designated Router (DR) for each multi- access networks, accessed via multicast address 224.0.0.6. For redundancy purposes, a Backup Designated Router (BDR) is also elected.

## DR and BDR election

- The router with the highest priority becomes the DR; second highest becomes the BDR. If there is a tie in priority, Whichever router has the highest Router ID will become the DR.
- By default router priority will be same.We can change it if we need it
- Default priority on Cisco routers is 1.If we set Router priority is O, that router will not participate in DR/BDR election
- In FrameRelay (NBMA -non broadcast multi access) network ,HUB Must be elected as DR .We can do this by changing router priority

## To change the priority on an interface:

  Router(config)#Interface  fa 0/0
  Router(config-if)# ip ospf priority 125

OSPF routers will form adjacencies with the DR and BDR. If a change occurs to a link, the update is forwarded only to the DR, which then forwards it to all other routers. This greatly reduces the flooding of LSAs.

**Note:** The DR election process is not pre-emptive .Thus, if a router with a higher priority is added to the network, it will

not automatically supplant an existing DR. We need to clear OSPF process for another DR/BDR election, which is not good in a production environment