

## OSPF (Open Shortest Path First) protocol:

- o OSPF is term which stands for Open Shortest Path First.
- o Link State protocol sends update based in state of the link.
- o When a link comes up and goes down it sends the updates.
- o OSPF protocols is a dynamic open standard Routing Protocol.
- o OSPF protocols is the Link-State dynamic routing protocol.
- o OSPF protocols uses the Shortest Path First (SPF) algorithm.
- o OSPF protocols uses IP protocol type **89** (not TCP or UDP).
- o OSPF External and Internal Administrative Distance is **110**.
- o OSPF is a classless Routing protocol and OSPF metric is Cost.
- o OSPF use multicast address **224.0.0.5** to send the hello packet.
- o OSPF use multicast address **224.0.0.6** for all designated routers.
- o OSPF default Hello time is **10 seconds** and dead time is **40 seconds**.
- o OSPF protocols supports both the VLSM and route summarization.
- o OSPF use wildcard mask, which is the reciprocal of subnet mask.
- o OSPF protocols supports both MD5 and clear text authentication.
- o OSPF protocols supports the summarization at ABRs router only.
- o OSPF are requires more memory and CPU processing to run.
- o OSPF work on area, Area 0 is the backbone of OSPF technology.
- o OSPF have Neighbor table, Topology table and Routing table.
- o OSPF packets are only sends to the neighbor of own Area.
- o OSPF protocols supports both IPv4 and IPv6 routed protocols.
- o OSPF load balancing with equal cost routes for same destination.
- o OSPF dynamic routing protocols supports unlimited hop counts.
- o OSPF protocols supports trigger updates for fast convergence.
- o OSPF sends update with a sequence number of **0x80000001**.
- o The sequence number ends with **0x7FFFFFFF** and start again.
- o The sequence number will increment by one in every updates.
- o OSPF protocol is more complex to setup and hard to troubleshoot.

