

Troubleshooting OSPF

Rohith Perumalla | 12/4/17

This past week I've been learning more about troubleshooting OSPF, a dynamic routing protocol used to allow large networks to manage routing table for remote and directly connected systems dynamically. The main types of OSPF networks I've been working with are point to point, broadcast multicasts, non-broadcast multicast, point to multipoint, and virtual links. When a multicast address is used by DROther to send their LSA's they use 224.0.0.6, and the address used by Designated Routers is 224.0.0.5. Knowing these addresses allows troubleshooting to be more straightforward by increasing the ability to assess where packets are coming from by inspecting the address on LSA's. The main things to look for and ensure are working within an OSPF enabled network while troubleshooting includes verifying the router types and their interfaces statuses, adequately assigned default routes, checking the dead and hello timers, and accurate authentication. When enabling OSPF, it is essential to ensure the right routers have been assigned the correct roles and a DROther is not assigned to the Designated Router. Also crucial to ensure that the default route to reach external networks is appropriately configured. It is also important when ensuring that adjacencies were formed that the hello and dead timers match up on connected interfaces and that an OSPF interface is not set as a passive interface. While these are only a few things that could cause issues with OSPF adjacencies they are pretty big issues with a network and are important to be able to be identified and fixed to ensure a working network.