IS-IS Lab Tasks

Task 1:

- Configure IS-IS on the CORE devices (R1-R4)

- System-ID Scheme: 0000.0000.00R#

- CORE Devices must only contain L2 Database

- Loopback 0 should be advertised into the IS-IS domain (Do not configure any interface level IS-IS command on Lo0)

Task 2:

- CORE devices should only advertise /32 host routes

- CORE to CORE links should only form L2 adjacencies (Always)

- Set CORE to CORE links metric to 1000

- CORE to CORE links should use IETF Three-way-handshake

Task 3:

- Enable MD5 authentication on the CORE to CORE links

- The authentication should use a key chain named ORHAN

- All CORE devices should use MD5 Authentication for the Level-2 LSPs

Task 4:

- Configure ISIS on Core to Aggregation devices as per the diagram

- IS-IS Metrics on the Core-Aggregation links should be set to 1000

- Assign Tag 2 to the host-routes of the Core/Aggregation devices with minimum amount of configuration

- Assign Tag 22 to the host-routes of the Access devices with minimum amount of configuration

Task 5:

- Configure IS-IS on Aggregation to Access devices (Set the Link metrics of 10000)

- These adjencencies must always be L1

- Leak only the host routes of L2 domain to L1 area 49.0001 on R5 (use the tags)

Task 6:

- Configure IPv6 Address-Family on all the routers

- Multi-Topology IS-IS must be used

- Use the same IPv4 metrics on the links

- Leak the L2 domain IPv6 routes to the L1 Area 49.0001 on R6

- Leak the L2 domain IPv6 host-routes to the L1 Area 49.0002 on R8

Task 7:

- All Core to Core links should be a part mesh-group 1

- Enable BFD on R1 to R2 link

- Configure the IS-IS to use track the BFD of that link to detect the adjacency changes

- Configure Fast-Reroute on the Core devices for all of the prefixes of L2 domain

Task 8:

- R7 should summarize R2's Loopback 22 prefixes into a /22 summary route and advertise only that summary route into L1 area 49.0002

- R5 should not be considered as a transit device for IS-IS domains after a reboot for 5 minutes

- Redistribute Lo55 connected interface routes into L1 area 49.0001 only