

Automatic Assignment of BIER BFR-ids in ISIS, version -00

Przygienda, Tantsura

Why & What ?



- › On non-trivial number of topologies and sub-domain BFR-id assignment via manual configuration is not feasible
- › A centralized or distributed solution solves the problem
 - Centralized: single point-of-failure, delay, when partitioned race conditions
 - Distributed: more resilient but more complex

Properties



- › Modelled after OSPF's DR and BDR (called D-BFR and BD-BFR) to prevent flaps on D-BFR failure
- › Extensions are backwards compatible to normal ISIS BIER
 - * Advertised BFR-id assignments by old routers are respected
 - * Assignment requests are not visible (by means of C bit) until settled

Gory Packet Details



- › New sub-sub-TLV for D-BFR preference per sub-domain
- › BIER-PE-BMP: new TLV emitted as D-BFR with BFR-id assignments upon request
- › Reserved bits in BIER Info-sub-TLV: to signal for assignment and advertise assignment in backwards compatible fashion