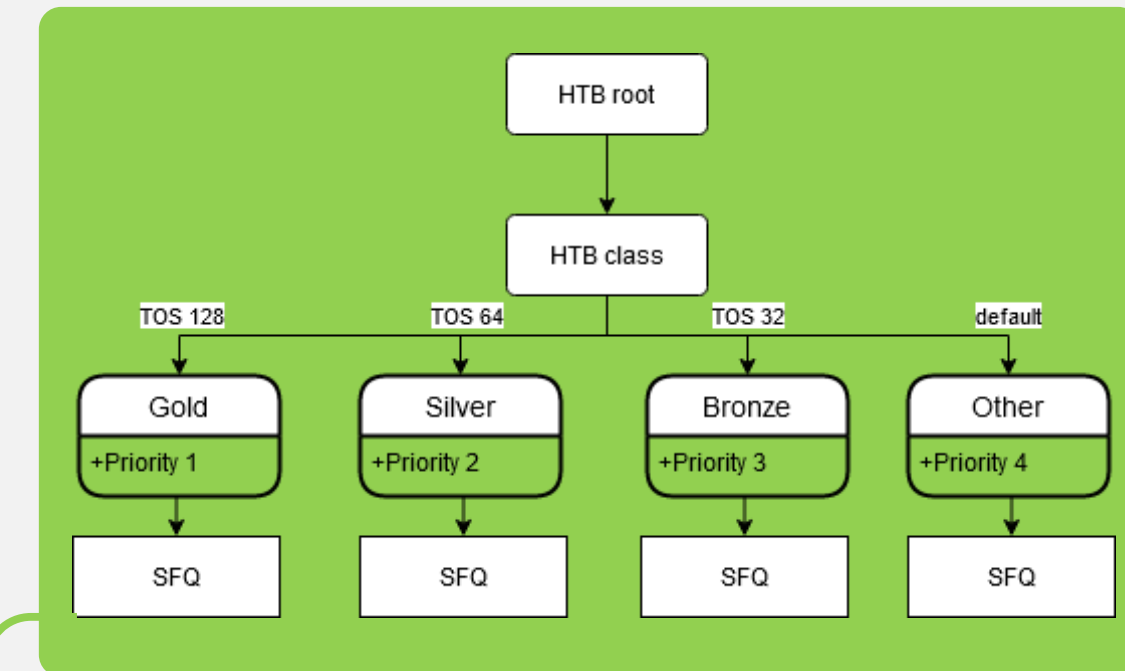


- We split bronze and silver by their TOS fields as they have higher data-rate than the bandwidth of the egress links
- Per packet splitting is done as packet re-ordering does not matter for our network

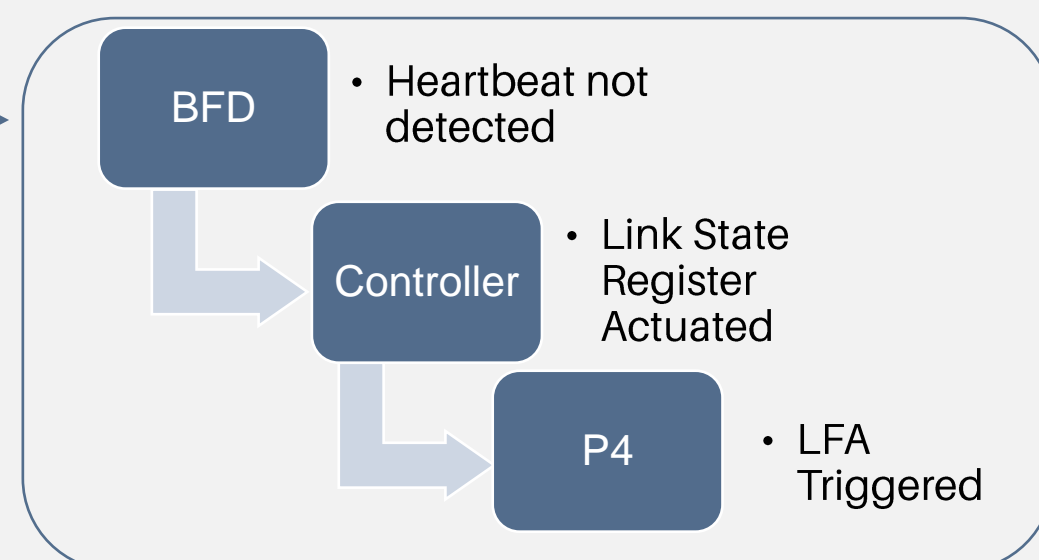
- The controller computes all valid next-hops (neighbors which are not hosts) for the bronze and silver traffic
- For gold traffic, the controller computes the shortest path for routing

- Send 10 BFD packets to each router to receive them at sub-second rate
- Send S-S BFD packets for failure detection
- Sniff on all switches for BFD packets to detect link failures (no packet in 1.2 seconds -> link failure)
- Use threads for parallelization



- Gold traffic is not being split
- We use shortest path routing + LFA for Gold traffic for increased packet preservation

- Triggers LFA's via the Controller
- Uses Dijkstra's Algorithm to calculate ideal next hop and LFA
- Switches between the two based on link failures via P4



Changed OSPF link weights so that travelling across the backbone has the same cost as going over the edges

Setup BFD for Router-Switch & Router-Router links

- static IP and ARP entries for switches

- Per packet splitting is done by assigning a new hash value for every packet
- As all the links are used, a portion of bronze and silver traffic always reach

Typical Gold Performance with LFAs enabled: 98% to 100%