# Quick Failover Algorithm in SCTP

## draft-ietf-tsvwg-sctp-failover

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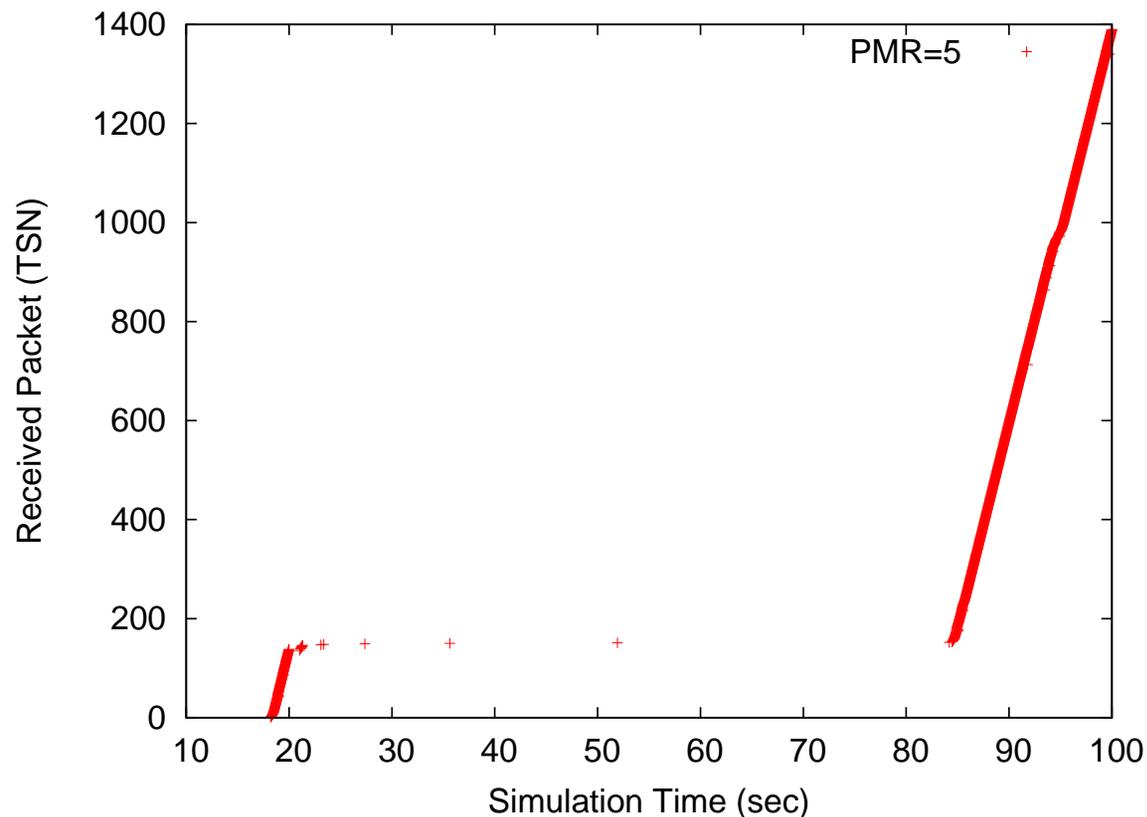Preethi Natarajan, Cisco Systems
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# What is Quick Failover?

- A solution for failover issue in SCTP
  - SCTP needs 30-60 secs to failover in standard settings
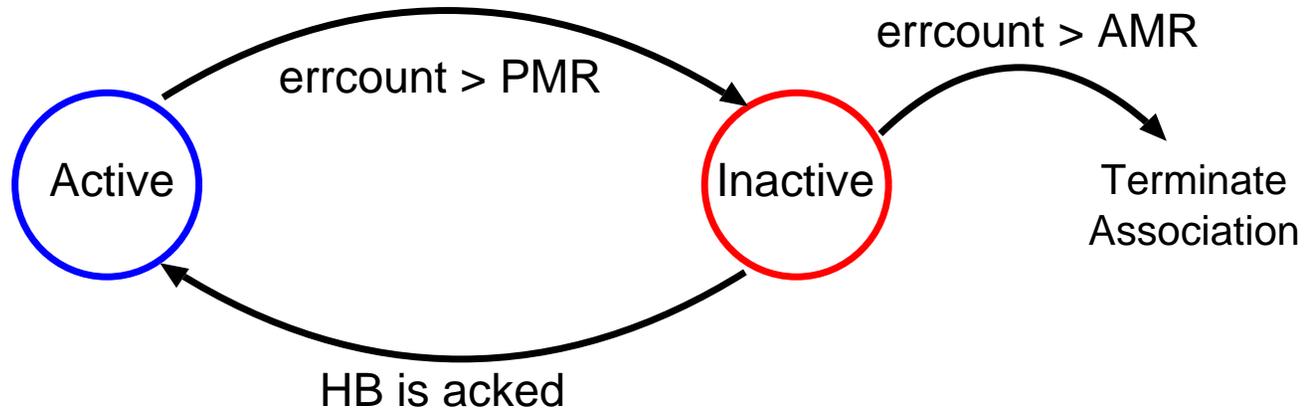
# Issues in SCTP Failover

□ SCTP needs 6 consecutive timeouts before failover
  ○ Path.Max.Retrans is recommended to be 5 in RFC4960



A is sending data to B and B has two address B1, B2 (B1 is primary)
when primary becomes unavailable at 20 sec, it takes 60 secs to
restart data transmission. (Path.Max.Retrans = 5)

# SCTP Path Management

☐ SCTP marks path inactive when errcount > PMR
  ○ Failover happens after path is marked as inactive

```
                        errcount > AMR

            errcount > PMR

   Active                    Inactive        Terminate
                                             Association

            HB is acked
```

# Quick Failover

- Introduce an intermediate state
  - When path is in PF, SCTP can utlize secondary path
    - Send HB to the primary and if HB ack returns, it quickly fallback to active
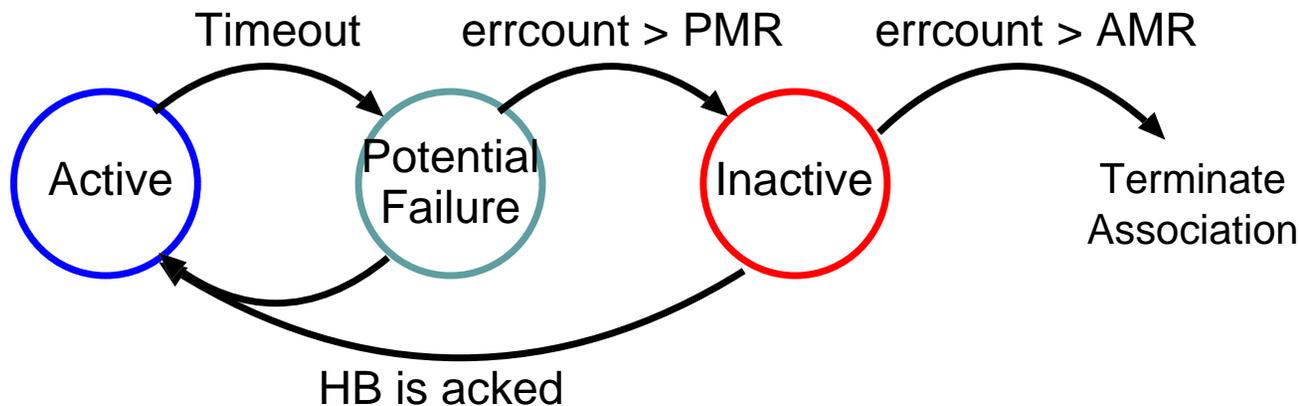
# Quick Failover Summary

- Use secondary path quickly in case of path failure
- Simple and sender only logic
- Research results indiacate it's useful and harmless
- No need to change existing SCTP applications
- It can be applied to both RFC4960 and CMT proposal

# Current Status

- Addressed comments we've got so far
    - Socket API consideration -> Section 6
    - Handling error_counter -> Section 5.4

- Adopted as an WG item

# Moving Forward

☐ More feedback/comments from the WG.
☐ Iron out a next revision (more concrete)
☐ Need more discussion on error_count handling?