Refresh-interval Independent RSVP-TE FRR
draft-chandra-mpls-ri-rsvp-frr-02

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Background

- **Draft Focus:**
  - Discusses “Refresh Interval Independent RSVP (RI-RSVP)” Fast-Reroute procedures
    - Enhancements to “Facility Protection” [RFC4090] procedures
    - Notion of RI-RSVP is discussed in [RSVP-TE-SCALING-REC] <draft-ietf-teas-rsvp-te-scaling-rec>
  - Draft introduced at IETF-91 [follow-ups in IETF-92, -93, -94]
    - Subsequent Revisions (including <draft-name> change) based on feedback received

- **MPLS RT Review [-02 Version]**
  - 3 Reviews
    - Reviewers: Guijuan Wang (Jean), Lizhong Jin, Mustapha Aissaoui
MPLS RT Review - [Reviewer 1]

- Jean’s review comments:
  - Combine all dependencies on other drafts in “Pre-requisites” section before discussing solution. Yes, will add a new section.
  - Define a new default interval for Remote NodeID hello.
    - This is defined in [RSVP-TE-SCALING-REC].
  - Clarify the “time out” described in removing bypass association object. Agreed, reference to “time out” is not necessary in Section 4.1.1; will remove it.
  - Conflict between Sections 4.2.2 & 4.2.3 on whether router should distinguish node failure from link failure. Agreed, it is not required; will update the draft.
  - Is new capability flag required?
    - Not required. RI-RSVP flag defined in [RSVP-TE-SCALING-REC] will suffice.
  - Too many failure cases described, they can be categorized. Yes, will do.
MPLS RT Review - [Reviewer 2]

- **Lizhong**’s review comments
  - Clarify the “time out” described in removing bypass association object. **Agreed, reference to “time out” is not necessary in Section 4.1.1; will remove it**
  - TTL value for Remote PathTear not specified. **Yes, will explicitly state that TTL must be set to 255.**
  - How state is deleted on router between PLR and NP-MP not documented. **Agreed, will include text in relevant section.**
  - What is the impact on FRR for bidirectional LSPs specified in draft-ietf-teas-gmpls-fast-reroute?
    - **This draft is specific to unidirectional packet LSPs [RFC4090]; considerations for bidirectional LSPs will need to be done separately.**
Mustapha’s review comments

- Draft does not reduce triggered messages for backup LSP signaling.
  - Once the restriction of short refresh time out is removed, the backup LSP signaling may occur at a pace that does not place undue load on any router.
  - Ability to operate at arbitrarily long refresh timer is the key because FRR may be temporary & LSPs are likely to undergo make-before-break.

- Methods in draft rely on Message-ID-ACK at scale, which triggers more churn if messages not acknowledged.
  - This problem has been addressed by “Per-Peer flow-control” technique specified in [RSVP-TE-SCALING-REC]
MPLS RT Review - [Reviewer 3] (contd.)

- Mustapha’s review comments (contd.)
  - With the use of an independent timer (not refresh timer) to clean up stale state, Conditional PathTear may not be required
    - Such configured timers though appropriate at some scale may not be so when scale increases
  - Such configured timers are being used in production networks
    - Lack of predictability at different scale is known to make n/w management complex
  - Path-Tear Procedures defined in the draft are complex
    - Conditional PathTear is a fully backward compatible extension to PathTear with simple processing rules; Remote PathTear is a simple mechanism that enables the use of a normal PathTear to remotely tear down state on Merge Point.
Dependency on [SUMMARY-FRR]

- Merge Point determination uses procedures defined in [SUMMARY-FRR] (<draft-mtaillon-summary-frr-rsvpte>)
  - If [SUMMARY-FRR] ends up using different objects from the one used presently, [RI-RSVP-FRR] will also be updated
Next Steps

- Update the draft incorporating RT reviewers’ comments
  - ETA - Within two weeks after IETF 95
- Request further review
- Request WG adoption