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RSVP-TE Summary Fast Reroute Extensions
draft-mtaillon-rsvpte-summary-frr-04

Authors:
Mike Taillon (mtaillon@cisco.com)
Tarek Saad (tsaad@cisco.com) - Presenter
Nicholas Tan (ntan@arista.com)
Abhishek Deshmukh (adeshmukh@juniper.net)
Markus Jork (mjork@juniper.net)
Vishnu Pavan Beeram (vbeeram@juniper.net)

Outline

- Background
- Reviews/Updates
- Summary/Next Steps

Background

- Draft initially introduced at IETF92, Dallas
- Focus is on addressing a scalability problem with current wide deployments of RFC4090 for RSVP-TE FRR
- The solution tries to minimize the amount of signaling and processing overhead that occurs at the PLR and MP post an FRR event by
  - associating primary LSPs with bypass (protecting) tunnel by use of group IDs so action is taken on a group versus LSP
  - exchanging a-priori post-FRR SREFRESH message-IDs so SREFRESHs continue after the FRR event- i.e. avoid full refreshes
- Document reviewed by Lou Berger and provided comments
- Document reviewed by MPLS RT (Mach Chen, Eric Osborne, Greg Mirsky) and provided comments

MPLS RT comments [Greg Mirsky]

- State clearly that intention of draft is to update RFC4090
  - ✓ Updated draft
- State clearly use of SUMMARY_FRR_BYPASS_ASSIGNMENT
  - ✓ Updated draft with usage of Extended ASSOCIATION object
- How does a PLR update MPs if the LER would not send the Path message?
  - ✓ The PLR originates a new Path message (that contains changes in the SFRR BA assignment) in accordance with rfc3209 section section-4.4.3

MPLS RT comments [Mach Chen]

- not clear whether draft covers P2P LSPs and P2MP LSPs
  - ✓Current focus is on P2P LSPs, P2MP will addressed in a future update
- when defining the Bypass_Group_Identifier and Summary_FRR_PLR_Generation_Identifier fields, there is few text explain the meaning and purpose
  - ✓Updated text and procedures
- in addition, for Summary_FRR_PLR_Generation_Identifier, it does not specify the length.
  - ✓Updated text and procedures
- "The SUMMARY_FRR_BYPASS_ASSIGNMENT subobject is added in the RECORD_ROUTE object prior to adding the node's IP address….
  - ✓Updated text and procedures with Extended ASSOCIATION object
- clarify what is meant an FRR group is active
  - ✓Updated text and procedures

MPLS RT comments [Eric Osborne]

- Feedback: read the document and agree with Mach that the issue is **valid** and the solution is **straightforward**. I can tell you from experience that this problem needs solving.

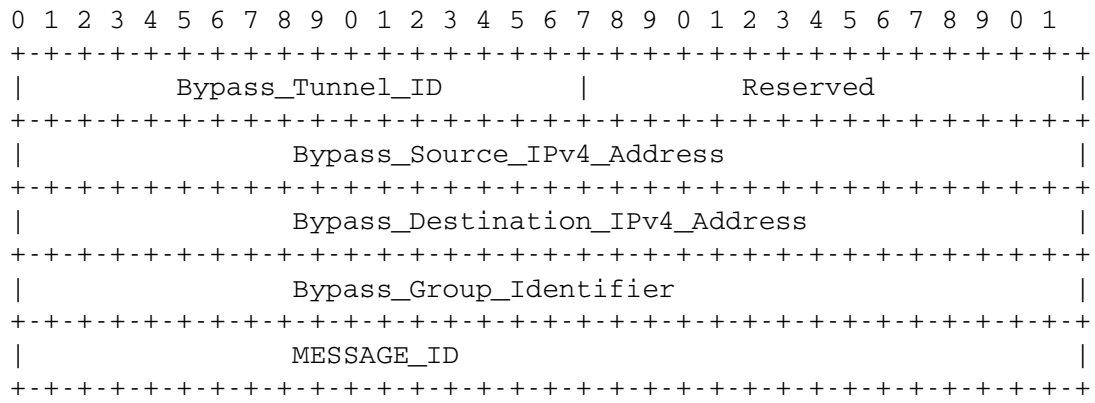
- There are parts of the document that need some cleanup and I agree with both Mach and Greg that there are parts that are unclear
  - ✓ Updated/clarified

Review comments [Lou Berger]

- RSVP object space is a pretty scarce resource. Consider reusing existing defined RSVP object instead of defining new SUMMARY_FRR_BYPASS_ACTIVE, e.g. PRIMARY_PATH_ROUTE Object
  - ✓ The only concern with using it is that the PPRO is a **mandatory** object
- Usage of RRO is wrong… (and is easily broken by RRO policies). I think extending an existing object class is a better approach - consider use of the ASSOCIATION object
  - ✓ Agreed, and updated draft and procedures to use ASSOCIATION object
- COMMENT 1:

B-SFRR Extended ASSOCIATION

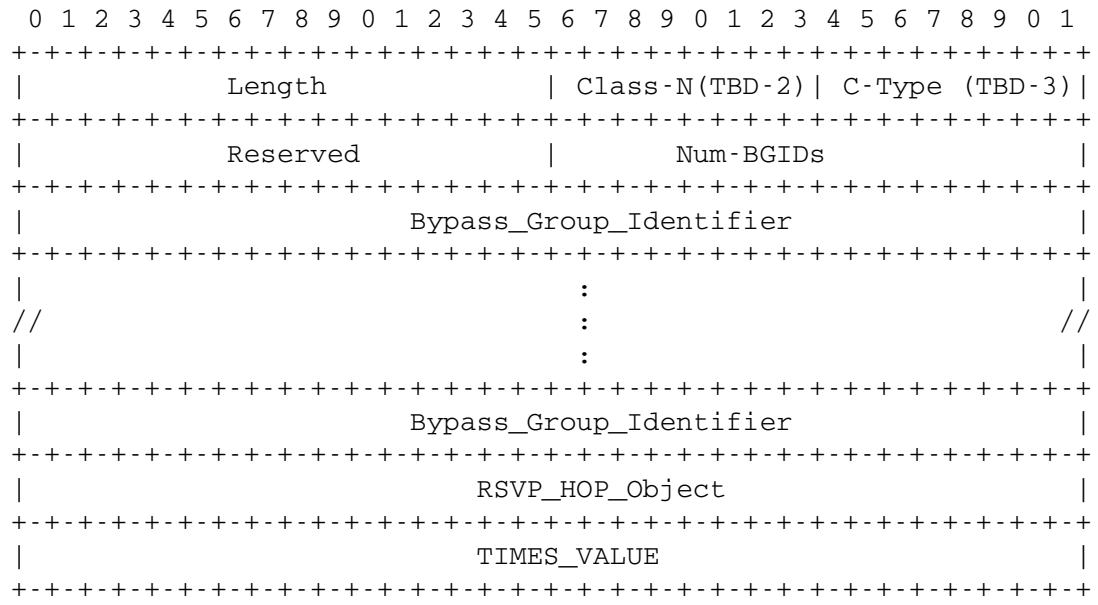
- RSVP ASSOCIATION object was defined in [RFC4872] as means to associate LSPs with each other, e.g. protected LSPs with their LSPs protecting them
- Generalized by additional extensions in RFC6780
- New SFRR extension:
  - A new Association Type: (TBD-1)
  - A new Extended Association ID:



Format of IPv4 Extended Association ID

B-SFRR ACTIVE Object

- Carried in the Path message of a bypass LSP session
- Serves as indication to MP that one or more SFRR groups of protected LSPs that got rerouted over the bypass tunnel.
- New object of B-SFRR
  - Class-Num = (TBD-2) of the form 11bbbbbb
  - Allows for backward compatibility



Format of B-SFRR ACTIVE Object

Next Steps

- Welcome further comments from WG
- Request to make this draft a WG document

Thank You!