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

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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:

```
+-----------------------------------+
| Bypass_Tunnel_ID | Reserved |
+------------------|---------|
| Bypass_Source_IPV4_Address |
| Bypass_Destination_IPV4_Address |
| Bypass_Group_Identifier |
| MESSAGE_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

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Format of B-SFRR ACTIVE Object
Next Steps

• Welcome further comments from WG
• Request to make this draft a WG document
Thank You!