

RSVP-TE Summary Fast Reroute Extensions

draft-mtaillon-rsvpte-summary-frr-01

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Outline

- **Updates**
- **Review of requirements and scope**
- **Summary**
- **Next Steps**

Updates from -00

- **New co-authors joined the draft**
- **Updates to SUMMARY_FRR_BYPASS_ASSIGNMENT
subobject to carry post FRR Summary
MESSAGE_IDs**

Review of requirements and scope

Requirements:

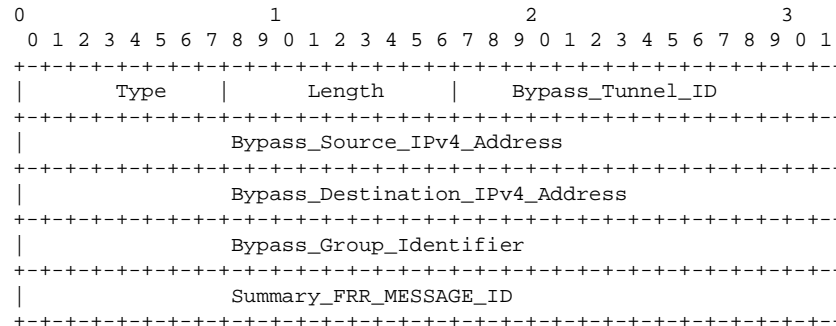
- **Fast reroute [RFC4090] widely deployed in packet RSVP-TE networks**
- **Under scale, Point of Local Repair (PLR) and Merge Point (MP) may host hundreds-of-thousands of LSPs**
- **In event of failure, the PLR and MP 's control planes become overwhelmed with control plane FRR processing (done per LSP)**
- **While message bundling helps, transmitting and processing full RSVP messages in a Bundle messages after FRR does not scale**
- **Motivation to allow FRR control plane procedures between PLR and MP to be signaled and processed on groups of LSP**

Scope:

- **Signaled using RSVP-TE [RFC3209]**
- **Using RSVP-TE FRR procedures [RFC4090]**
- **RSVP Srefresh procedures [RFC2961]**

RSVP-TE Summary FRR Procedures (PRIOR to failure)

1. PLR creates and manages RSVP-TE Summary FRR LSP groups and shares them with MP via signaling RSVP PATH RRO
 - New SUMMARY_FRR_BYPASS_ASSIGNMENT subobject (added to PATH/RESV RRO), contains:
 - Summary FRR Group Identifier and post FRR MESSAGE_IDs



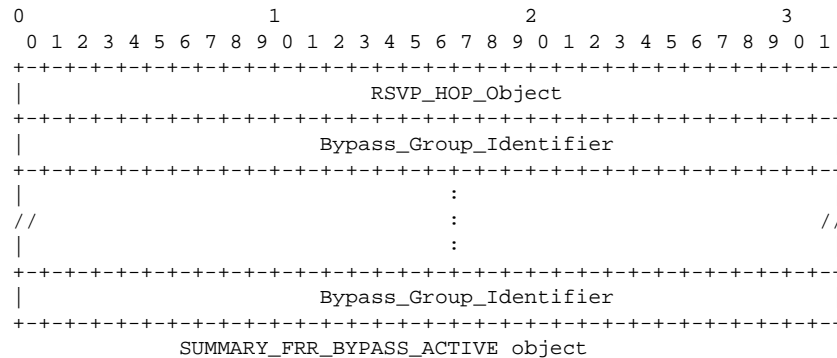
IPv4 Summary FRR Bypass Assignment

2. MP learns Bypass Group Identifier, acknowledges via signaling (RESV RRO)
 - MP includes post FRR MESSAGE_ID in RESV
3. PLR receives acknowledgement from MP, handshake complete

RSVP-TE Summary FRR Procedures (POST failure)

1. PLR notifies MP with list of affected Summary FRR Group Identifiers via a single RSVP PATH message

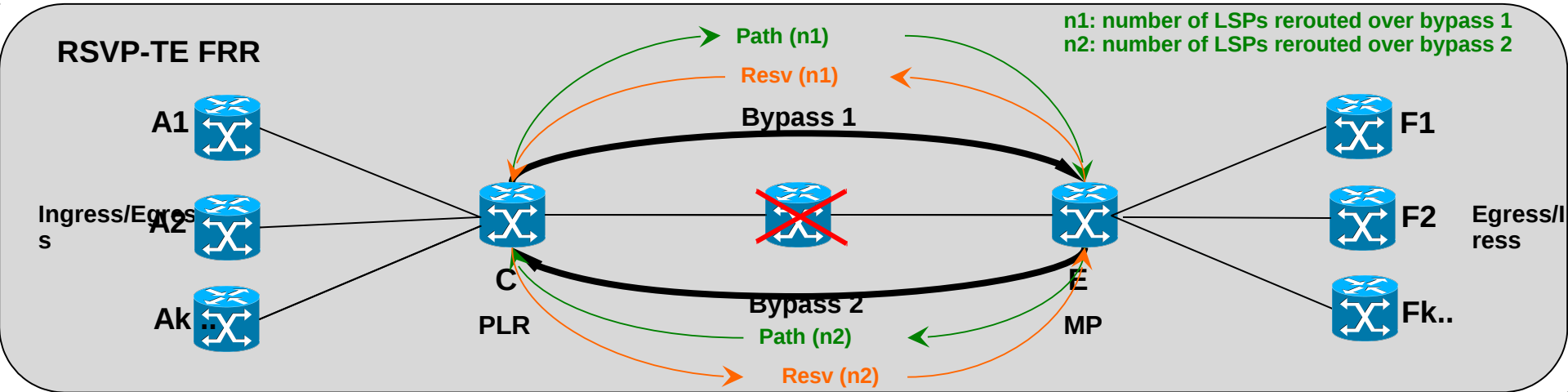
- New SUMMARY_FRR_BYPASS_ACTIVE object contains List of affected Summary FRR Group Identifiers



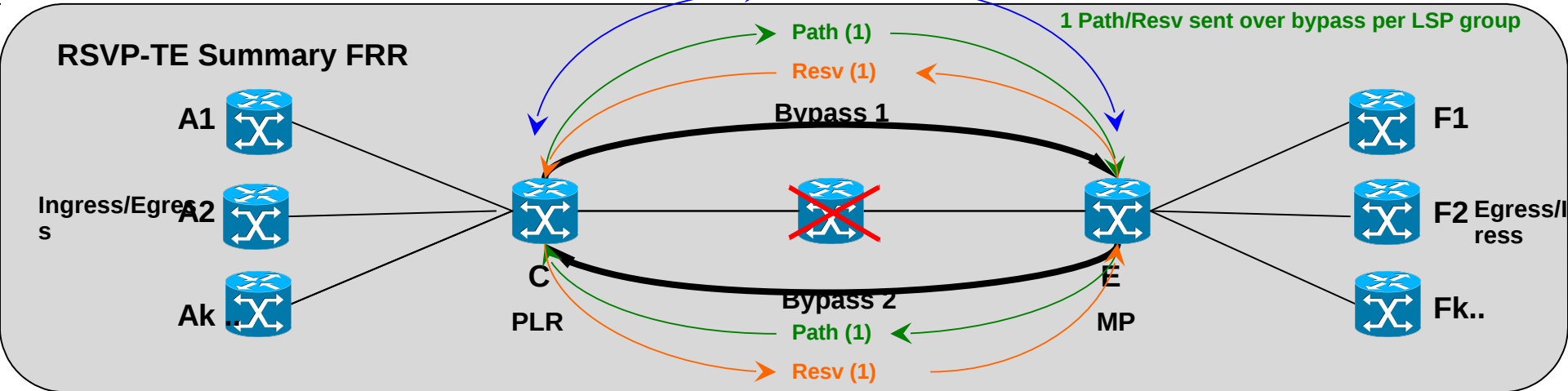
2. MP processes normal FRR handling for each LSP identified in Bypass Active Object (RSVP_HOP is copied from BAct obj)
3. MP copies PATH Bypass Active Object and signals RESV message
4. Srefreshes between MP and PLR proceed using MESSAGE_IDs exchanged prior to failure

Summary FRR procedures (recap)

Existing



Proposed



Next Steps

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



Thank You.