

MRT-FRR for Segment Routing

draft-agv-rtgwg-spring-segment-routing-mrt-02
IETF-96

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Overview

A **100% coverage** fast-reroute solution for IP/LDP traffic using Maximally Redundant Trees (MRT).

Associated algorithms all implemented and verified.

MRT Architecture (RFC 7812) and Algorithm (RFC 7811) drafts are now IETF standards

Goal is to extend MRT for Segment Routing



Extensions to support MRT for Segment Routing

- IGP extension for SR to be extended to carry SR-MRT capability

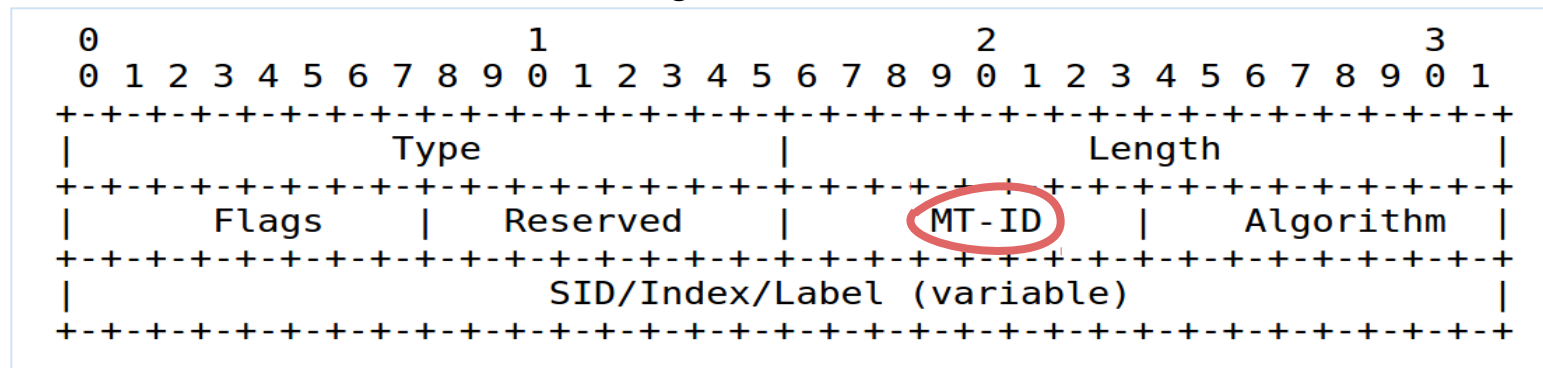
Advertise SR-MRT capability (IGP Extension for MRT to incorporate SR Capability)

[MRT Option 1A]

- MRT for SR

SR to allocate three Labels corresponding to three different MT-ID per segment.

- Use IGP extension for SR to carry above three allocated labels



- Use MRT algorithm to update the MRT forwarding topology



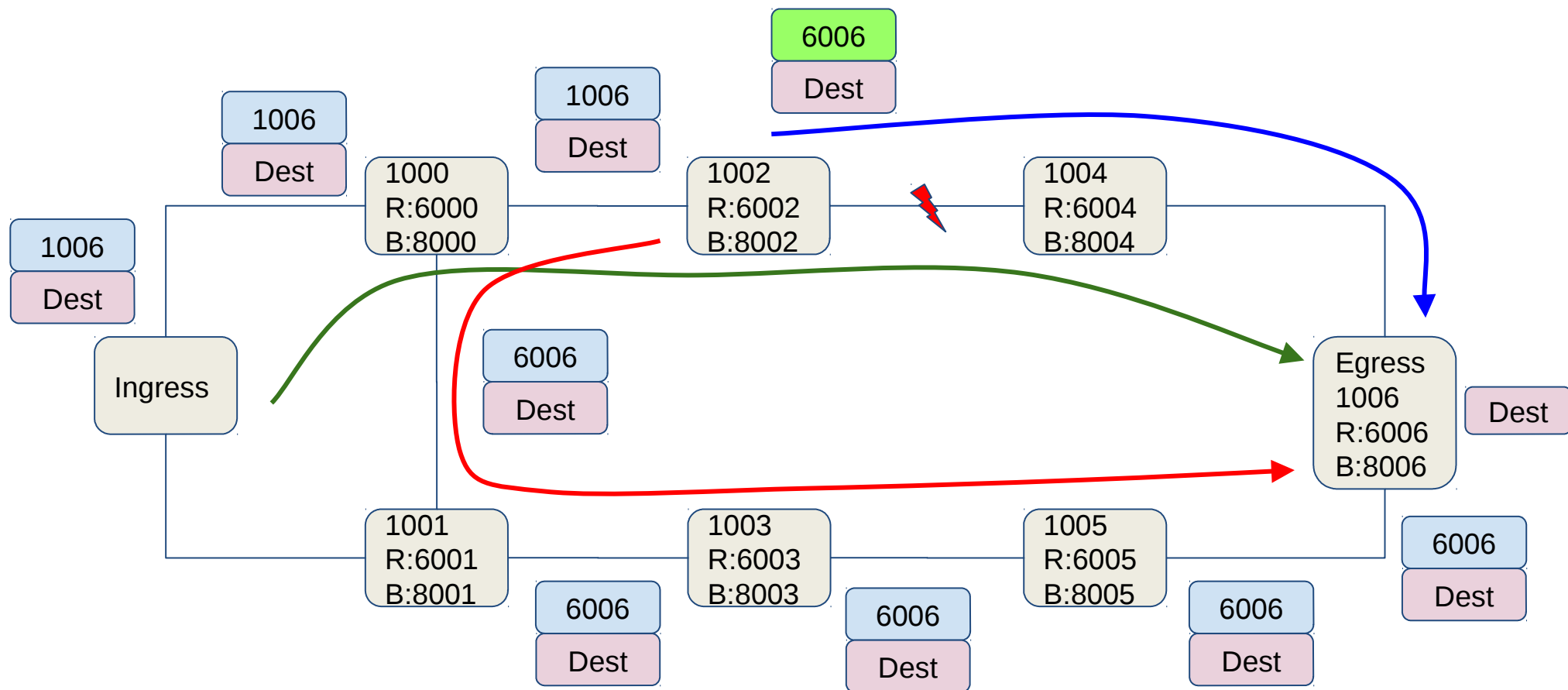
Extensions to support MRT for Segment Routing

[MRT Option 1B]

- Use topology-id label to identify MRT forwarding topology
- Use MRT algorithm to update the MRT forwarding topology



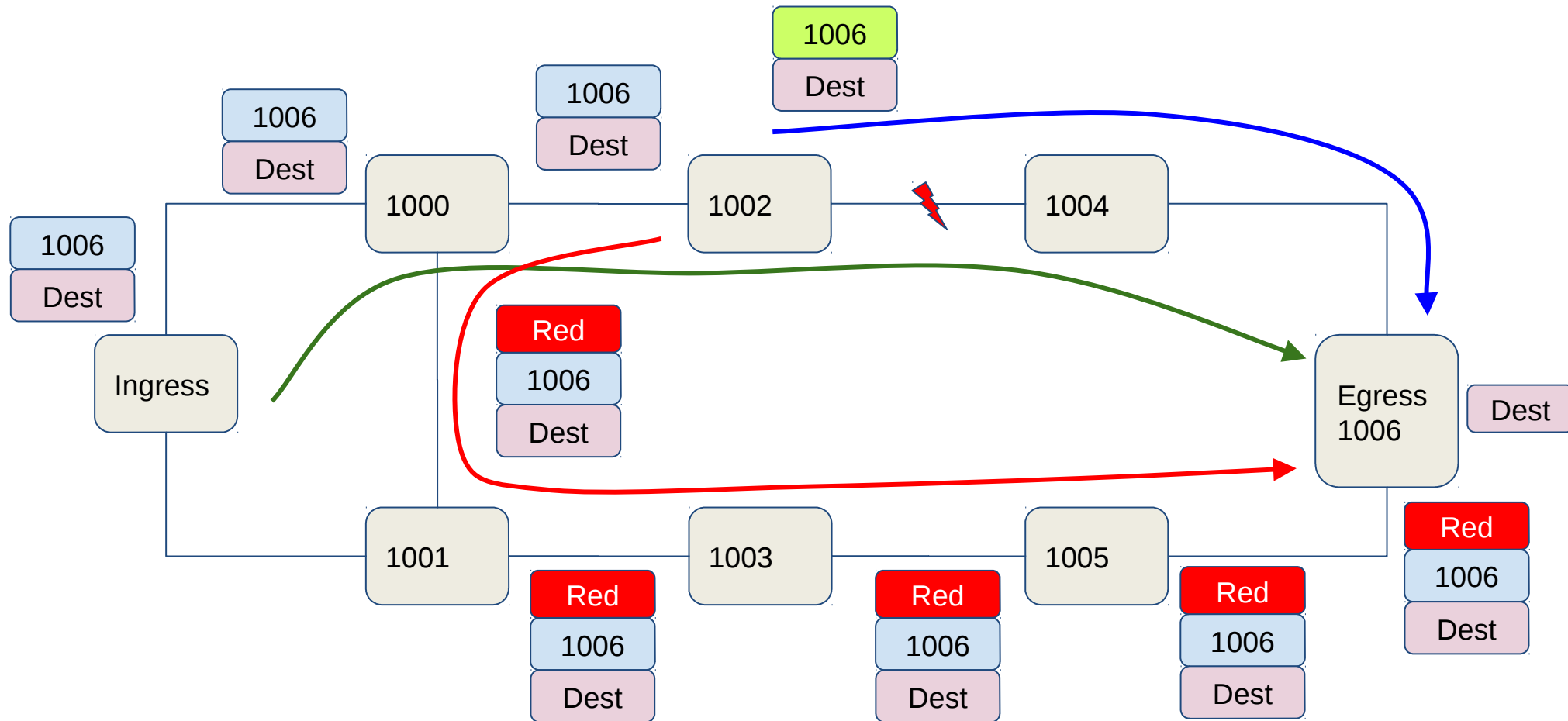
MRT Segment Routing Best Effort Path (1A)



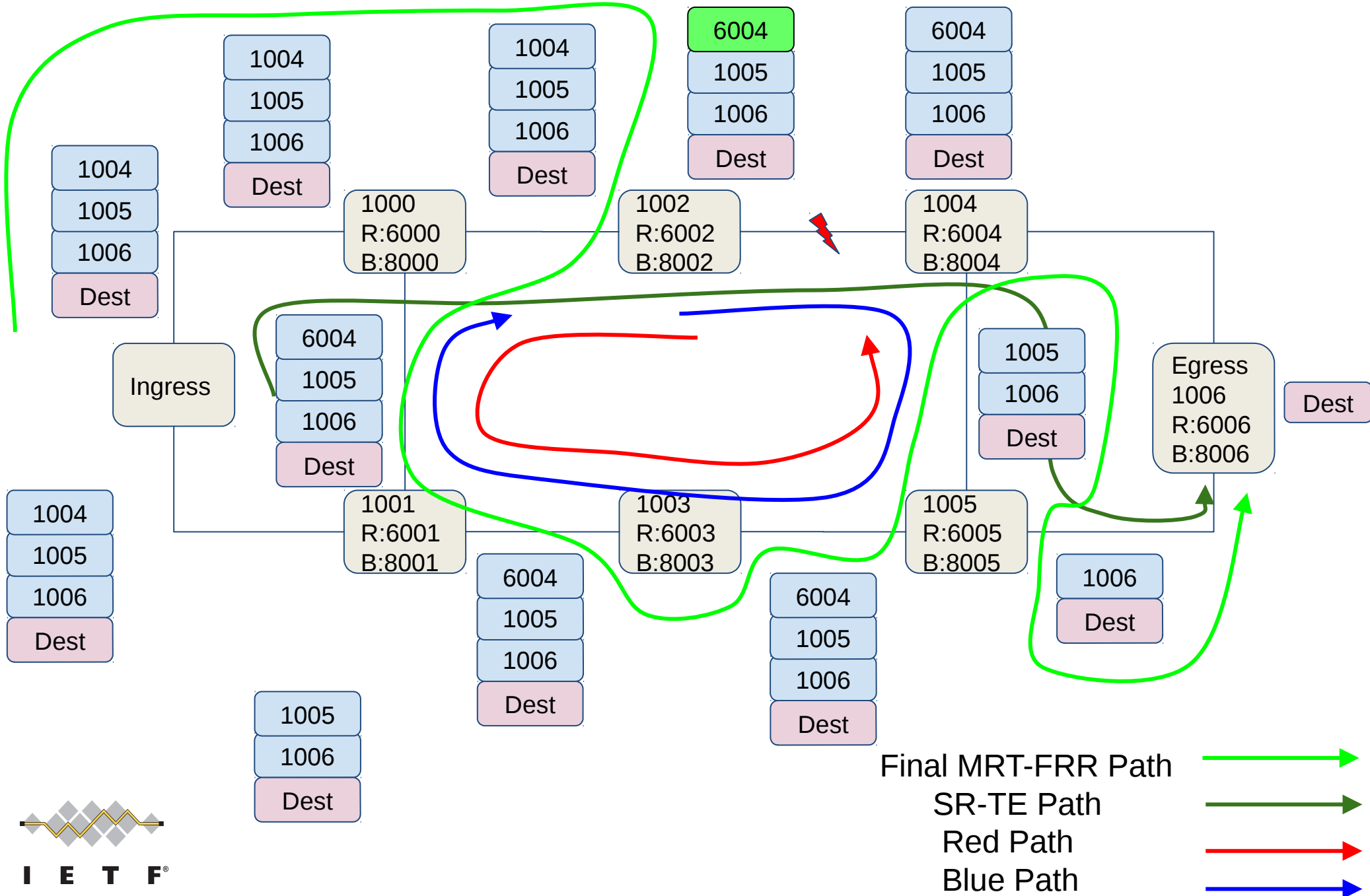
Default Path →
Red Path →
Blue Path →



MRT Segment Routing Best Effort Path (1B)



MRT Segment Routing Traffic Engineering Path (1A)



Summary

[REQ-1] IGP extension for SR to be extended to carry SR-MRT capability

[REQ-2] MRT for SR – covered in
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Thanks & Questions