

non-MPLS BIER LSR Extensions

draft-ietf-bier-lsr-non-mpls-extensions

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History

- 2018/11: draft-dhanaraj-bier-isis-non-mpls-extensions-00
 - Non-MPLS, but Ethernet-only scope
- 2019/1: draft-dhanaraj-bier-lsr-ethernet-extensions
 - Name reflects Ethernet-only scope
- 2019/4: why should we limit it to Ethernet-only?
 - Work stalled since then (besides WG adoption)
- 2022/2: draft-ietf-bier-lsr-non-mpls-extensions-00

Domain-wide Unique BIFT-IDs?

- RFC8296 says that for non-MPLS, BIFT-IDs are domain-wide unique
 - Two ways in draft-ietf-bier-non-mpls-bift-encoding
 - Hard encoding of <BSL, SD, SI> as BIFT-ID – no provision/signaling needed
 - Encoding of <IBU, SI> as BIFT-ID – provisioning of IBU needed
 - IBU is just an opaque number to provide flexibility as with MPLS
- RFC8279 does not mandate domain-wide unique BIFT-IDs
 - draft-zzhang-bier-rift argues that non-MPLS BIFT-IDs can be like MPLS labels
 - No provisioning of “IBU” needed yet still has the flexibility as with MPLS
 - BIFT-IDs are just 20-bit opaque numbers like MPLS labels but not called labels
 - They can be locally assigned independently or coordinated so that consistent values are used
 - Just like SRLB and SRGB labels

BIFT-ID Approach in This Document

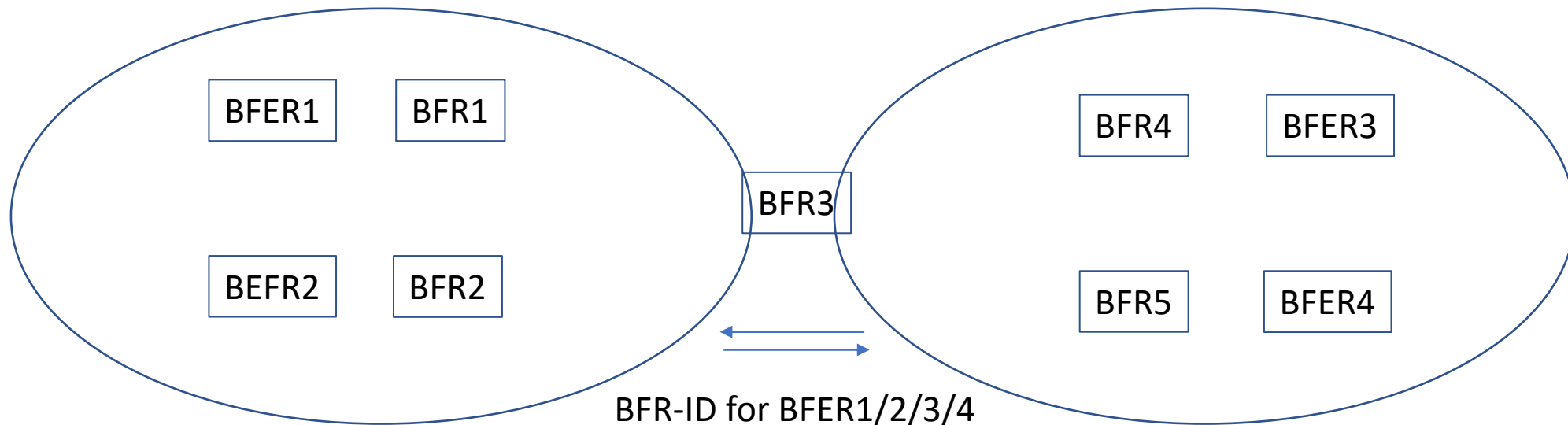
- Update RFC8296 that domain-wide unique BIFT-IDs not mandated even for non-MPLS BIER
- Either of the following are allowed:
 - draft-ietf-bier-non-mpls-bift-encoding approaches
 - Signaled BIFT-IDs that can be local or domain-wide unique

Changes in Latest Revision

- Name & scope change
 - Non-MPLS BIER with anything
- Editorial changes
- Leaking between areas/levels
 - BIER Info (sub-)TLV do not need to be leaked if BFR-id is 0
 - BIER encapsulation info do not need to be leaked

BIER Info Leaking across Area/Level

- Only <subdomain/MT, BAR/IPA, BFER-IDs> need to be leaked
 - BIER routers in one area do not care about BFRs in another area
 - BIER routers in one area do not care about encapsulation in another area



Next Steps

- Comments?
 - This unblocks IDR/BGP-LS extensions
- Ready for WGLC