

# Supplement of BGP-LS Distribution for SR Policies and State

draft-lp-idr-bgp-ls-sr-policy-supplement

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IDR

IETF#124

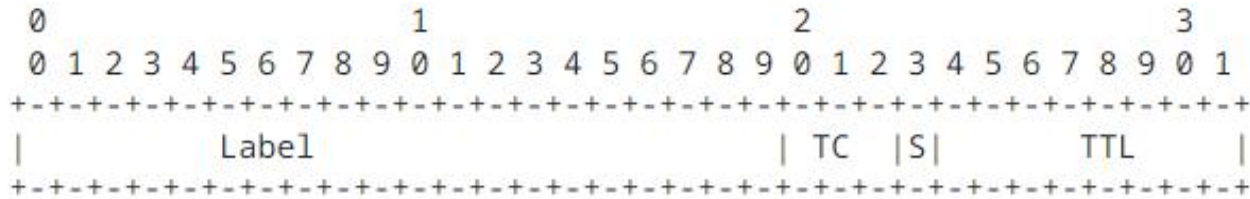
Nov, 2025

# Background and Motivation

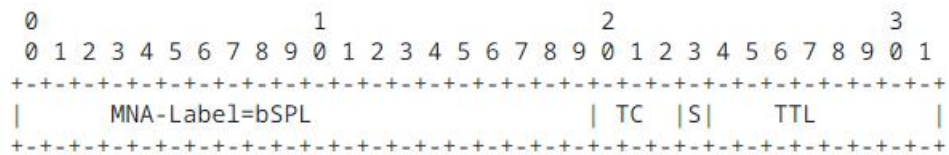
- RFC9857 describes the mechanism to collect the SR policy information that is locally available in a node and advertise it into BGP Link State (BGP-LS) updates.
  - Various TLVs are defined to enable the headend to report the state at different level.
    - SR Candidate Path State TLV
    - SR Segment List TLV
    - SR Segment Sub-TLV
- A few segment-list-state-related information is not yet included
  - [Whether the segment list is in administrative shut state](#). In the network , the segment list may be shut by an administrator.
  - [Whether the segment list is a backup path](#). [I-D.ietf-pce-multipath] specifies the protection relationship among segment lists within the candidate path. There might be segment lists in the CP acting as backup paths, the backup lists only carry rerouted traffic after the protected path fails.

# MPLS Label Stack Entry(LSE) in the SID List

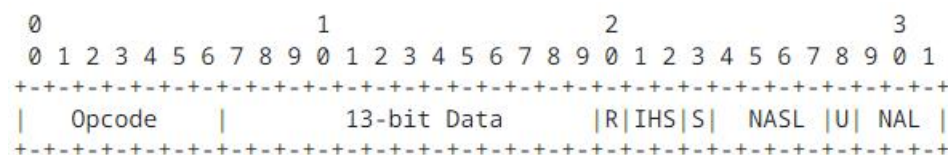
- Besides SR-MPLS SID, MPLS labels such as SPLs or entropy labels can be inserted into the SID list and reported via SR Segment Sub-TLV in BGP-LS
  - When carrying the MPLS LSE in the SR Segment Sub-TLV, the TC, S, and TTL are set to 0



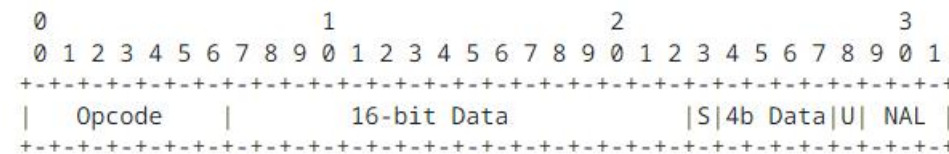
- MNA defines different LSE formats [draft-ietf-mpls-mna-hdr], for some LSEs, TC and TTL are repurposed to carry additional information



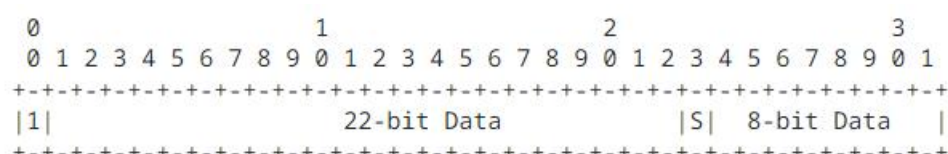
LSE format A



LSE format B



LSE format C

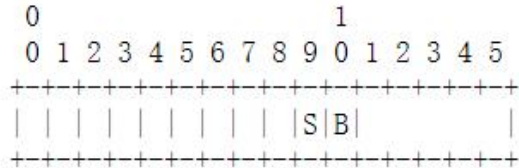


LSE format D

- Reporting 32-bit LSEs (with non-zero TC/TTL field) inserted into the SID list via BGP-LS is not supported.

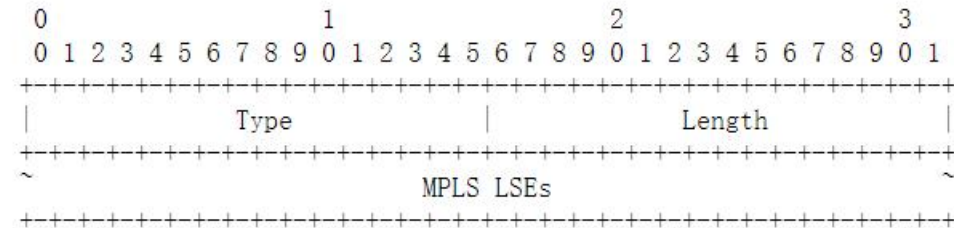
# BGP-LS Extensions

## ➤ 2 New Flags in SR Segment List TLV



- S-Flag: Indicates the segment list is in administrative shut state when set.
- B-Flag: Indicates that the segment list is a pure backup path as specified in [I-D.ietf-pce-multipath] when set

## ➤ 1 New MPLS LSE Sub-TLV for SR Segment List TLV



- carry one or more generic 32-bit MPLS LSEs

# Next Steps

➤ Welcome feedback and comments.

**Thank You !**