

PCEP Extensions for Segment Routing

IETF 93
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draft-ietf-pce-lsp-setup-type-03.txt

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draft-ietf-pce-segment-routing-03.txt

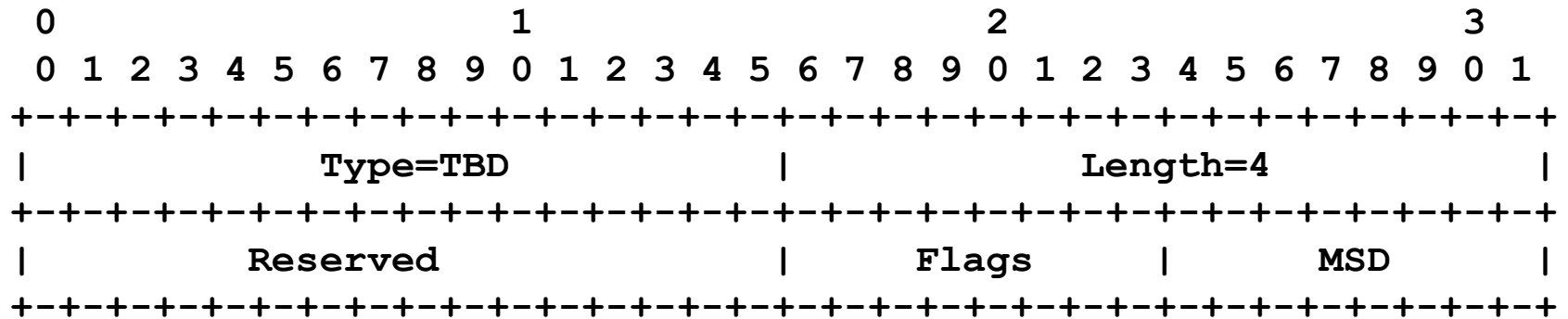
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Background

- **LSP Setup Type**
RSVP-TE is default LSP setup method in PCEP;
LSP setup via other methods must be possible
- **Segment Routing**
Enables head-end node to select path for traffic
without using signaling protocol e.g. RSVP-TE

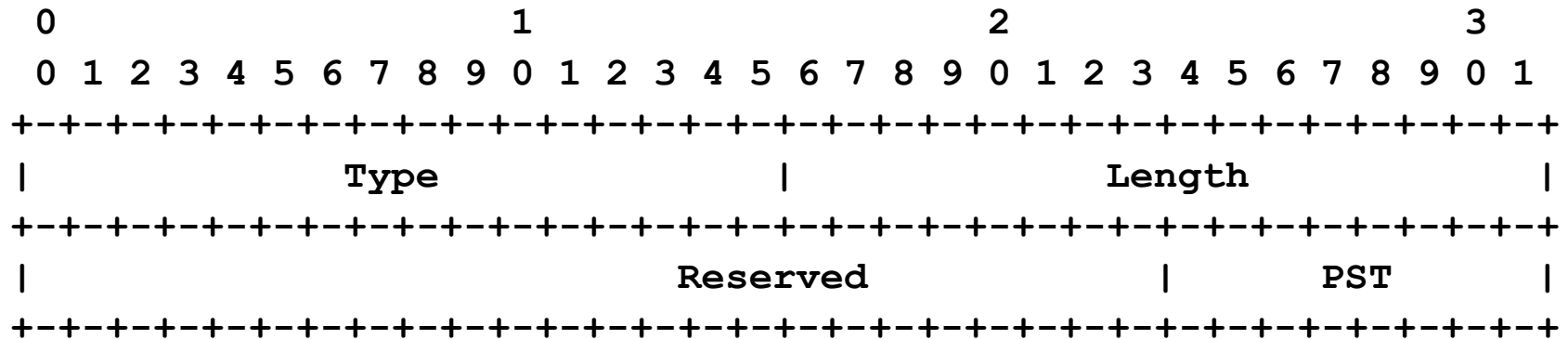
A SR path can be computed manually or automatically via Stateful or Stateless PCE.

SR-PCE-CAPABILITY TLV



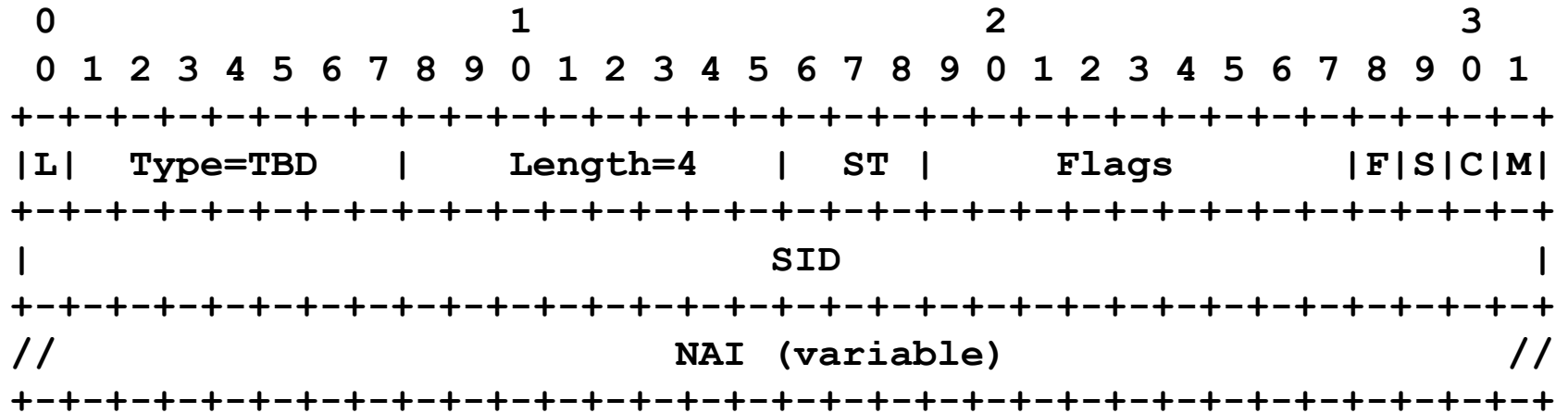
- Optional TLV exchanged via OPEN message

PATH-SETUP-TYPE TLV



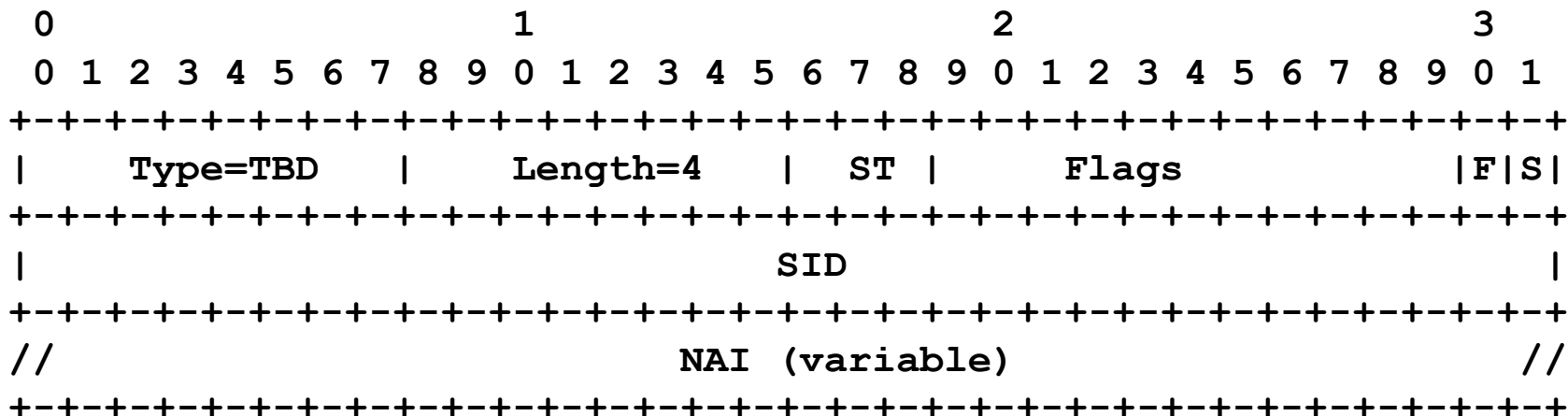
- PST field indicates path setup method
 - PST 0: RSVP-TE signaling
 - PST 1: Segment routing
- TLV optionally carried in RP or SRP object
 - Mix different path setup types on a PCEP session
 - Absence implies RSVP-TE signaling

SR-ERO Sub-Object



- Segment ID (SID)
- Node or Adjacency Identifier (NAI)
 - identifies node or adjacency associated with SID.
- Segment Type (ST)
 - Identifies the type of NAI associated with SID.
- PCE provides SID **and/or** NAI

SR-RRO Sub-Object



- Fields have the same meaning as SR-ERO sub-object

Early IANA Allocation

- There are 3 or 4 implementations of these drafts
- The implementations (and drafts) use code points that have not been allocated by IANA

We are going to fix this!

- Early IANA allocation has now been requested
- We're asking to get the code points that are already in use.

Allocation from the RSVP Parameters Registry

- PCEP-SR uses new RSVP ERO and RRO sub-objects

Object	Sub-object	Implemented with code point
EXPLICIT_ROUTE	SR_ERO	5
ROUTE_RECORD	SR_RRO	6

- These code points are currently unused...
- ...but the ERO's range 5-31 is "for explicit resource identification"

Next Steps

- Complete IANA early allocation
- Drafts are otherwise stable
- Ready for WGLC post-IANA allocation

Thank You !