

# ISIS Extension to Support Transport Network Slices

draft-zch-lsr-isis-network-slicing-05  
draft-peng-lsr-isis-network-slicing-srv6-00

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# Purpose

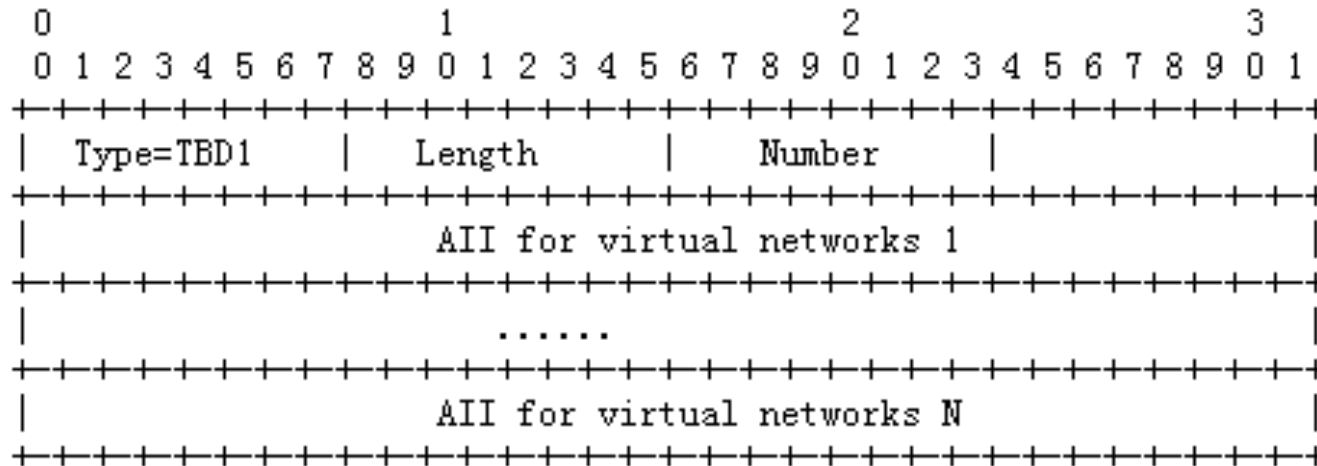
- A framework of transport slices is provided in draft-nsdt-teas-ns-framework.
- A unified TN-slice identifier to indicate the topology, computing, storage resources of the dedicated virtual network and how to compute SR-BE or SR-TE path according to TN-slice Identifier combined with other criteria is defined in draft-peng-teas-network-slicing .
- These draft describes the IS-IS extensions required to distribute TN-slice Identifier(that is All in this draft) information in an AS.

# Extensions

- Router Capabilities for TN-slice Identifier
  - Defines a new sub-TLV of IS-IS Router Capability TLV-242.
- Advertising TN-slice Identifier as a new TE parameter of a link
  - Defines a new TN-slice Identifier list sub-TLV to indicate which slice the link is in .
- Advertising TN-slice Identifier for L2 Bundle Member:
  - Defines a new L2 Bundle Member TN-slice Identifier sub-TLV of TLV-25 to advertise TN-slice Identifier for L2 Bundle Member associated with a parent L3 adjacency .
- Advertising Segment Routing Identifiers per TN-slice Identifier
  - SR-MPLS
    - Advertising prefix-SID per TN-slice Identifier
    - Advertising Adjacency-SID per TN-slice Identifier
    - Advertising LAN-Adj-SID per TN-slice Identifier
  - SRv6
    - Advertising Locators and End SIDs for specific TN-slice
    - Advertising SRv6 End.X SIDs and SRv6 LAN End.X SID for specific TN-slice

# Router Capabilities for TN-slice Identifier

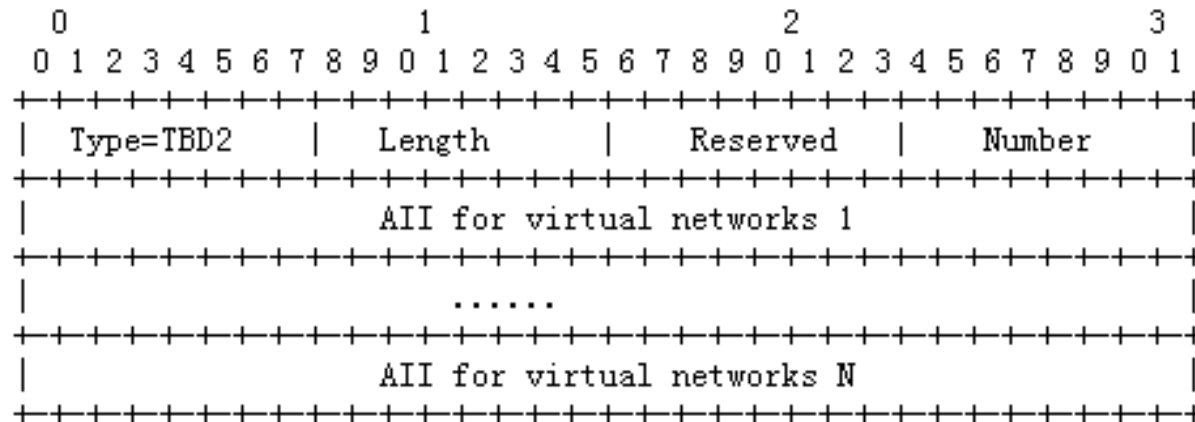
- A new sub-TLV of IS-IS Router Capability TLV-242



- Number: The Number of virtual networks.
- All for VN: allocate different TN-slice identifier (All) for different virtual networks. All is used to distinguish different virtual network resources.

# Advertising TN-slice ID as a new TE parameter of a link

- The TN-slice Identifier list sub-TLV



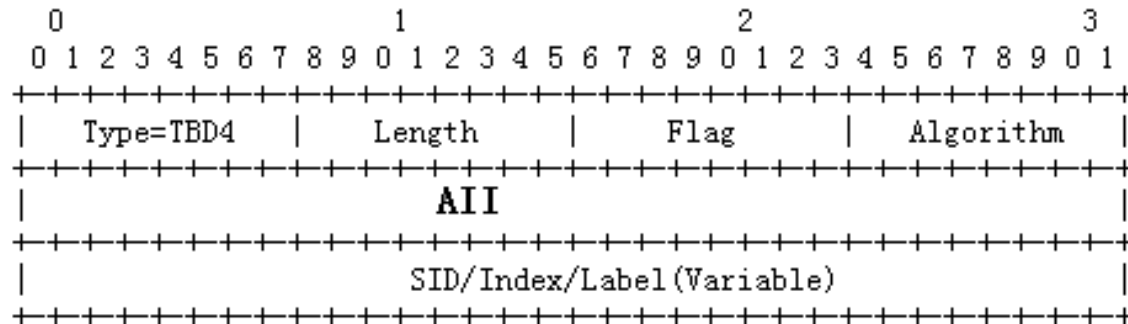
- Number: The Number of virtual networks.
- All for VN: allocate different TN-slice identifier (All) for different virtual networks. All is used to distinguish different virtual network resources.
- This sub-TLV SHOULD appear once at most in each TLV. Indicates that a link MAY belong to multiple virtual networks.

# Advertising TN-slice Identifier for L2 Bundle Member

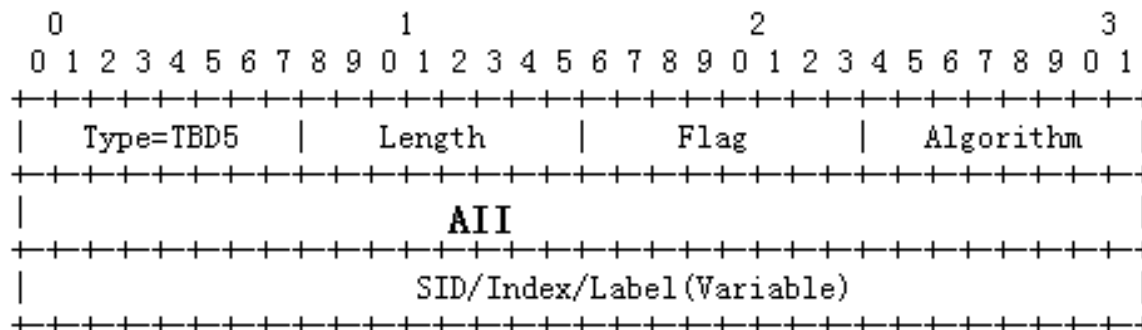
- A new L2 Bundle Member TN-slice Identifier sub-TLV of TLV-25 (L2 Bundle Member Attributes) [RFC8668].
  - advertise TN-slice Identifier for L2 Bundle Member associated with a parent L3 adjacency which is Point-to-Point.

# Advertising MPLS SIDs per TN-slice Identifier

- Advertising prefix-SID per TN-slice Identifier
  - A new extension of the existing Prefix-SID [RFC8667].

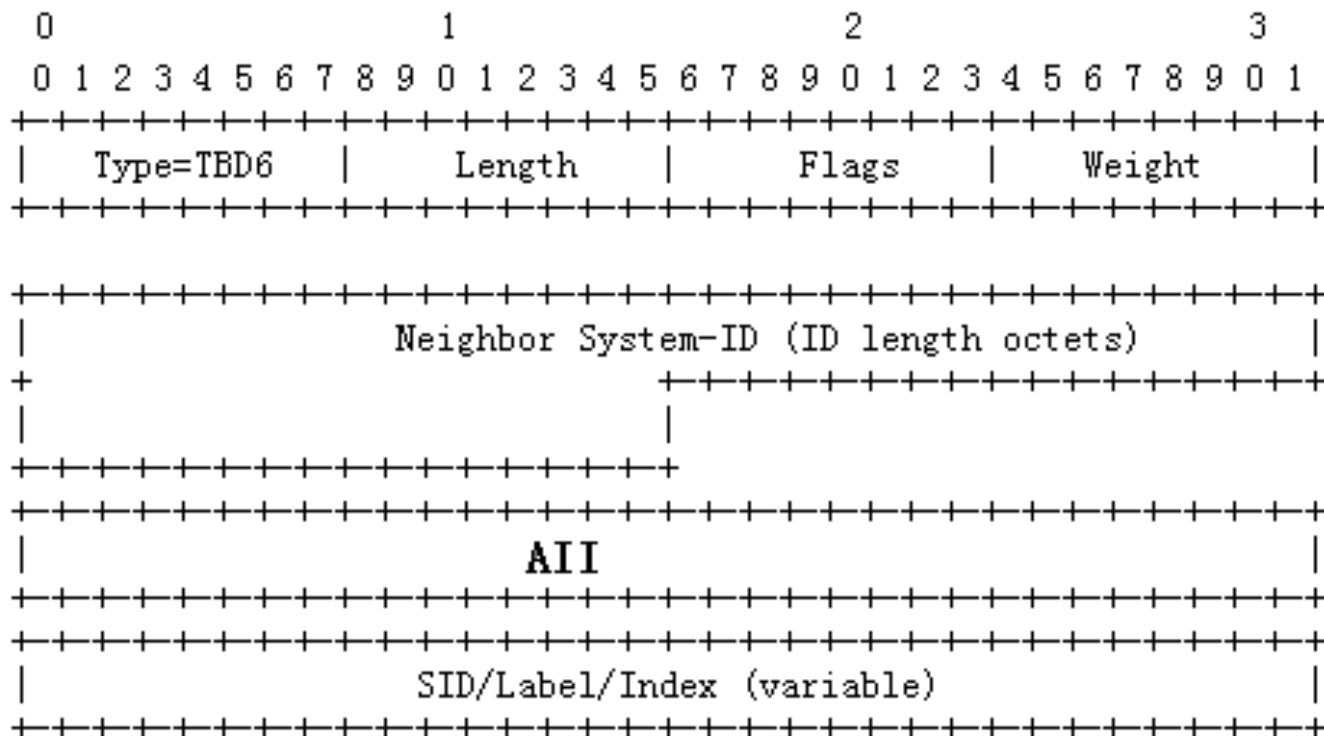


- Advertising Adjacency-SID per TN-slice Identifier
  - A new extension of the existing Adjacency Segment Identifier (Adj-SID) Sub-TLV [RFC8667].



# Advertising MPLS SIDs per TN-slice Identifier

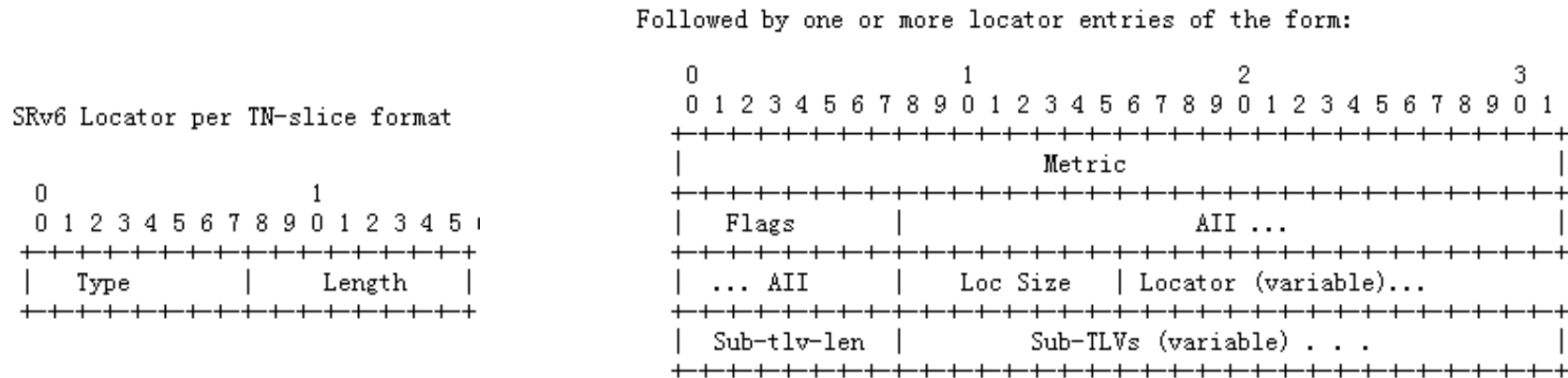
- Advertising LAN-Adj-SID per TN-slice Identifier
  - A new extension of the existing Adjacency Segment Identifier (LAN-Adj-SID) Sub-TLV [RFC8667].





# Advertising SRv6 Locators for specific TN-slice Identifier

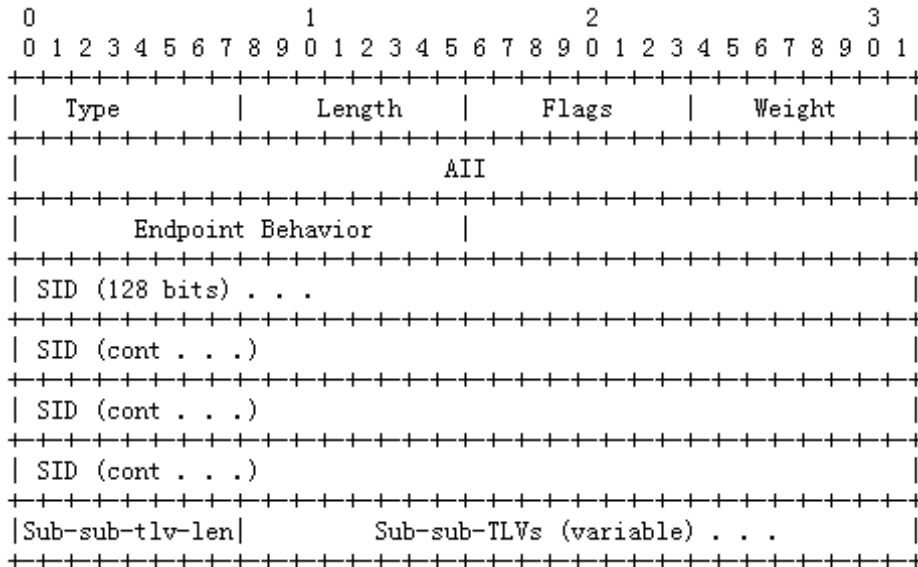
- Advertising SRv6 Locator per TN-slice



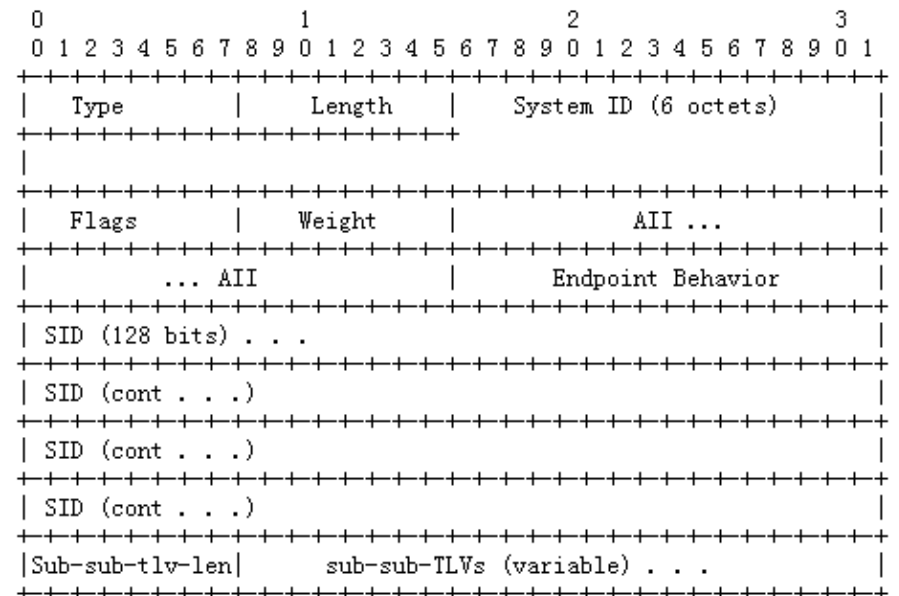
- Advertising SRv6 End SID for specific TN-slice
  - Reuse SRv6 End SID sub-TLV(defined in draft-ietf-lsr-isis-srv6-extensions)
    - SRv6 End SIDs inherit the All from the parent locator.

# Advertising SRv6 Adjacency SIDs for specific TN-slice Identifier

- Advertising SRv6 End.X SID per TN-slice sub-TLV



- Advertising SRv6 LAN End.X SID per TN-slice sub-TLV



# IGP Flexible Algorithm with L2bundles

draft-peng-lsr-flex-algo-l2bundles-01

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# Purpose

- This document describes how to create Flex-algo with L2bundles scenario.

# What's about the latest version?

- Remove L2 Bundle Member EAG Extension.
- Use L2 Bundle Member Attributes TLV/sub-TLV with traditional "Administrative group (color) Sub-TLV" and "Extended Administrative Group Sub-TLV" ( RFC8668 ) based on discussions on LSR maillist.
- Change the document to informational.

# IGP L2 Bundle Member EAG advertisement

- ISIS L2 Bundle Member EAG advertisement
  - "Administrative group (color) Sub-TLV" and "Extended Administrative Group Sub-TLV" MAY be contained in ISIS TLV-25
  - Advertise multiple L2 Bundle Attribute TLV (ISIS TLV-25) with each specify a single bundle member.
- OSPF L2 Bundle Member EAG advertisement
  - "Administrative group (color) Sub-TLV" and "Extended Administrative Group Sub-TLV" MAY be contained in "L2 Bundle Member Attributes sub-TLV" .
  - Advertise "L2 Bundle Member Attributes sub-TLV" per L2 Bundle Member.

## Next Step

- Welcome questions , comments.
- Welcome to fulfill this work together

Thank you!