

# Passive Interface Attribute

[\[draft-wang-lsr-passive-interface-attribute\]](#)

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# What The Proposal Want To Solve?

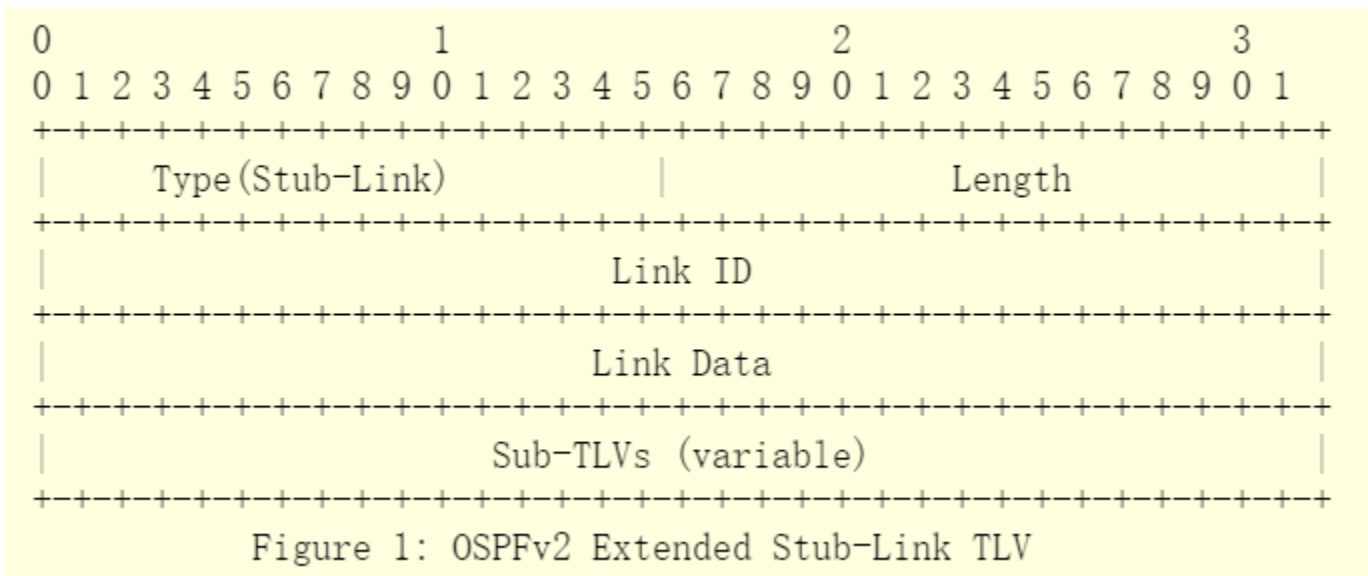
- Passive Interfaces are used commonly in the network
  - Within data center, they are used for the VLAN interfaces that serving the layer 2 broadcast domain.
  - In the inter-AS boundary, they are used to protect each domain from IGP flapping that caused by other domain.
  - In the edge compute scenario that described by <https://tools.ietf.org/html/draft-dunbar-lsr-5g-edge-compute-ospf-ext-01>, the passive interface is used to connect the server to the network.
- But currently, there is no suitable place to advertise the passive interfaces and their associated attributes.

# Existing Possible Solutions

- ISIS(RFC5029) defines Link-Attribute Sub-TLV, but this sub-TLV can only be carried within the TLV 22, which is used to describe the attached router.
- OSPFv2(RFC2328) defines link type within Router LSA, the type 3 can be used to describe the stub link(passive interface).  
But
- OSPFv3(RFC5340) has removed type 3 link type.
- **It is necessary to extend the OSPFv2/v3 and ISIS to transfer the passive interface and their related attributes**

# OSPFv2 Extension Proposal

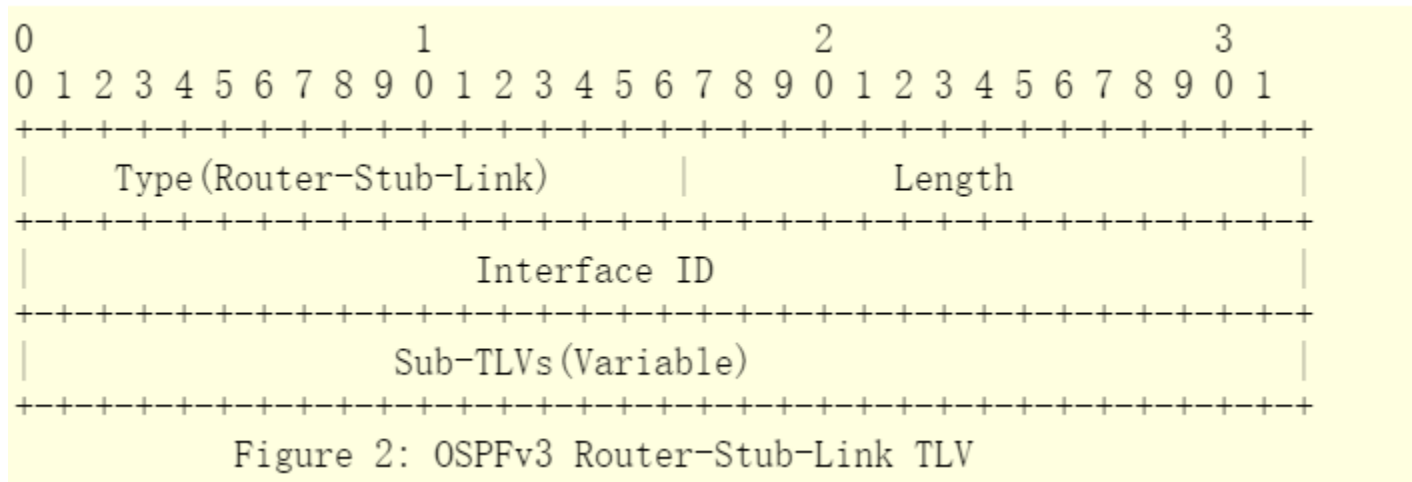
- RFC7684 defines OSPFv2 Extended Link Opaque LSA to contain additional link attribute TLV
- Currently, only OSPFv2 Extended Link TLV is defined.
- We propose define OSPFv2 Extended Stub-Link TLV to contain the stub-link related sub TLV.



- Existing sub-TLV that defined within "OSPFv2 Extended Link TLV Sub-TLV" can be included if necessary.

# OSPFv3 Extension Proposal

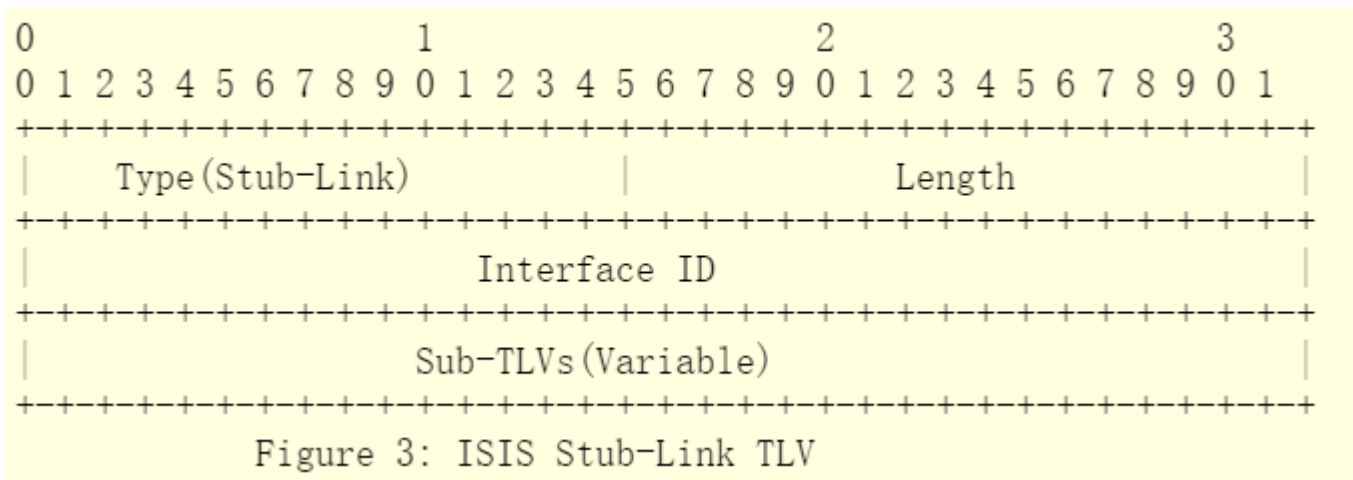
- RFC8362 defines the OSPFv3 LSA in TLV tuples.
- We propose to define the Router-Stub-Link TLV to describe a single router passive interface. This TLV should only be contained within the E-Router-LSA.



- Existing sub-TLV that defined within "OSPFv3 Extended-LSA Sub-TLV" can be included if necessary.

# ISIS Extension Proposal

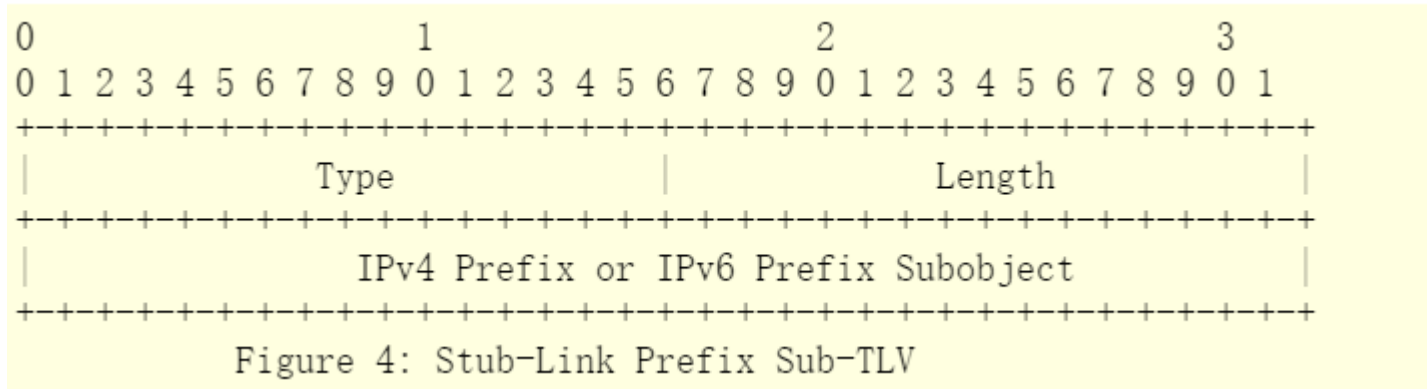
- One new top TLV within ISIS is proposed, as the followings:



- Existing sub-TLV that defined within "Sub-TLVs for TLVs 22, 23, 25, 141, 222, and 223" can be included if necessary.

# Newly defined Sub-TLV

- One new sub-TLV to describe the ip address information that associated with the passive interface is defined:



- Subobject is defined within RFC3209.
- Propose one independent Registry CodePoint “Stub-Link Attribute”, which can be referred by OSPFv2/v3 and ISIS

# Further Plan

- Comments?
- Thanks all experts for past review(Acee, Peter, Tony, Les, Jeff etc).
- Co-Authors are welcome.
- Adopt as WG Document?

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