Advertisements of Stub Link Attributes

draft-wang-lsr-stub-link-attributes-04

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What The Proposal Want To Solve?

- Non-TE Inter-AS topology recovery [draft-ietf-idr-bgpls-inter-as-topology-ext]
  - Between Ases
  - Among ASes
- Traffic Engineering to different servers based on the stub link characteristics [EPE effect]
- ... ...

Scenario 1: P2P Stub Link Between ASes
- One BGP session, multiple stub links between each ASBR pair

Scenario 2: LAN Stub Link Among ASes (IX)
- One BGP session/pair, multiple stub links shared among ASBRs on the LAN

Scenario 3: Stub Link to Anycast Servers
- S1 (IPA)
- S2 (IPA)
- S3 (IPA)
OSPFv2/3 & IS-IS Extension Proposal

✓ OSPFv2/3 & IS-IS take the similar format.
✓ Newly defined “Link Prefix” sub-TLVs to contain the prefix of the stub link.
✓ Included in the corresponding LSA/PDU
✓ Prefix Sub-TLV is not the identifier of the stub link, it is one kind of stub-link attributes
OSPF[RFC5392] defines **Link TLV** within Inter-AS-TE-v2/v3 LSA to carry TE information about inter-AS links.

RFC[5316] defines **Inter-AS Reachability TLV** to achieve the same purpose.

The following sub-TLVs must be present for every inter-AS link:
- Remote AS Number, IPv4/IPv6 Remote ASBR ID sub-TLV

RFC5392 and RFC5316 based solution for the **Non-TE scenarios** has the following cons:
- Not efficient for every inter-as stub link to include the redundant information
- Not possible to describe the LAN stub link among ASes.
- Need Rogue information to describe the stub-link between AS and edge servers.
- Populated unnecessary the TE database
Further Plan

• Comments?
• To forward it as WG Document if the updates address the previous concerns.

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