IGP Extensions for Segment Routing based VTN

draft-xie-lsr-isis-sr-vtn-mt-01

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Background

- VPN+ framework is described in *draft-ietf-teas-enhanced-vpn*
  - VTN is introduced as the virtual underlay network with required topology and resource characteristics

- SR for VPN+ is defined in *draft-dong-spring-sr-for-enhanced-vpn*
  - Associate SR SIDs with different set of network resource for packet processing
  - Resource-aware SIDs can be used to build resource guaranteed SR virtual networks

- This document describes the MT based control plane for SR VTN
  - Distribution of the VTN information to network nodes and controller

Mechanisms in this draft

- MT-ID is reused as the identifier of VTN in control plane
- Use IS-IS Multi-topology for VTN topology advertisement
- Use IS-IS SR to advertise topology-specific SR-MPLS SIDs or SRv6 Locators/SIDs
- Advertise TE attributes for each VTN
  - One layer-3 link can participate in multiple VTNs
    - How to advertise topology-specific TE attributes needs to be specified

Updates in -01 version

- Add description about the advertisement of topology-specific link bandwidth
  - Topology-specific max. link bandwidth is used to advertise the subset of bandwidth reserved for a particular VTN
  - The advertisement of other TE attributes at per-topology level is for further study

- Remove the text about associating L2 bundle member links with MT-IDs
  - Based on the comments and discussion on the mail list
  - This is just an alternative mechanism to topology-specific TE attribute

Next Steps

- Further comments are welcome
- Content of this draft is straightforward
- Need WG's opinion about the draft type
  - Standard track or informational
- Consider for WG adoption?

Thank You