BGP-LS Extension for Distribution of IP Tunnel Information

draft-dong-idr-ls-ip-tunnel-00

Jie Dong, Zhenbin Li (Huawei)
Jeff Tantsura (Ericsson)
Hannes Gredler
Background

• IP Tunnels are widely used in networks which do not deploy MPLS

• When mapping service flow to IP tunnel, controller needs the information of available IP tunnels

• This document proposes to extend BGP-LS to distribute IP tunnel information
Proposed Solution

• New NLRI type for IP tunnel identifier information

- Protocol-ID:
  • Static configuration
  • Specific IP tunnel signaling protocol

- IP Tunnel Descriptor TLVs
  • IPv4/6 Tunnel Head-end address
  • IPv4/6 Tunnel Tail-end address
  • Tunnel ID
  • Tunnel Type
  reused from TE-LSP
Proposed Solution (cont.)

• IP Tunnel Parameters TLV
  – Carried in BGP LINK_STATE Attribute
  – Only used with IPv4/IPv6 Tunnel NLRI
  – Defined sub-TLVs
    • Tunnel Name
    • Description
    • Status
    • Encapsulation: format and semantics determined by Tunnel Type
    • CoS
    • MTU
Operational Consideration

• Existing BGP-LS operational procedures applies
• Ingress nodes of IP Tunnel is responsible for the distribution of IP tunnel information
• Egress nodes of IP tunnels MAY report the IP tunnel information
Next Steps

- Solicit comments & contributions
- Improve the draft accordingly