BGP-LS EPE InterAS TE
IETF 104, Prague

Shraddha Hegde, Juniper Networks
Srihari Sangli, Juniper Networks
Xiaohu (Tiger) Xu, Alibaba, Inc.
Agenda

- Background
- Problem statement
- Proposal
- Ask & Next step
Inter-AS SR TE

Background

- Draft regarding BGP-LS extensions for BGP EPE; Not related to IGPs running (passive) on Inter-AS links.
- draft-ietf-idr-bgpls-segment-routing-epe-17 describes mechanism to carry BGP peering segments in BGP-LS.
  - Refers to RFC7752 for relevant TE link attributes.
- Gaps in BGP-LS EPE in scenarios where centralized Controller needs to build paths for inter-AS TE purposes.
Inter-AS SR TE
Problem-1 & Proposal

- Managed as single administrative domain and centralized Controller to establish Inter-AS SR TE.
  - Issue: No mechanism to inform links used for providing FRR protection.

- Proposal
  - Introduces ‘F’ flag for the peering SID.
  - Links represented by FRR SIDs will carry traffic when there is a failure.
Inter-AS SR TE Problem-2

- eBGP multi-hop peering across multi-AS network, parallel links used for load-sharing & network managed by centralized Controller.
  - Issue: Local & Remote BGP peering addresses are not sufficient to identify the underlying links.
Inter-AS SR TE Proposal-2

- PeerAdjSID MUST be advertised for Inter-AS links.
  - Should contain TE attributes, local, remote interface addresses.
- PeerNodeSID should contain link local IP address
  - Hence, Controller can co-relate the Inter-AS links.
- Caveat: Unnumbered interfaces for Inter-AS links are not supported.
Summary & Next steps

- Proposal strengthens Inter-AS SR TE in the mentioned scenario.

- Request IDR to accept it as wg document
Thank you