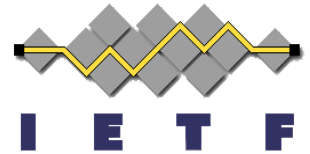


BGP-LS EPE InterAS TE

IETF 104, Prague

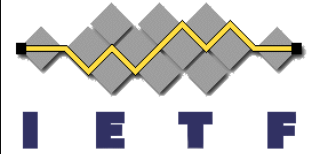
Shraddha Hegde, Juniper Networks
Srihari Sangli, Juniper Networks
Xiaohu (Tiger) Xu, Alibaba, Inc.



Agenda

- Background
- Problem statement
- Proposal
- Ask & Next step

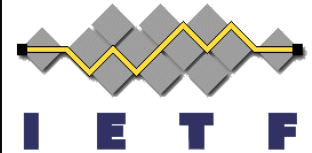
Inter-AS SR TE Background



- 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



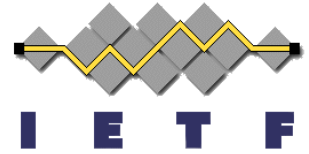
- Managed as single administrative domain and centralized Controller to establish Inter-AS SR TE.
 - Issue: No mechanism to inform links used for providing FRR protection.

- Proposal



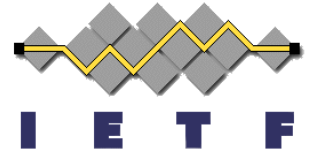
- Introduces 'F' flag for the peering SID.
- Links represented by FRR SIDs will carry traffic when there is a failure.

Inter-AS SR TE Problem-2

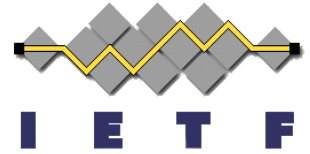


- eBGP multi-hop peering across multi-AS network, parallel links used for load-sharing & network managed by centralized Controller.
- Issue: Local & Remote BGP peering addresses are not sufficient to identify the underlying links.

Inter-AS SR TE Proposal-2

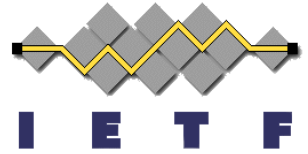


- PeerAdjSID MUST be advertised for Inter-AS links.
 - Should contain TE attributes, local, remote interface addresses.
- PeerNodeSID should contain link local IP address
 - Hence, Controller can co-relate the Inter-AS links.
- Caveat: Unnumbered interfaces for Inter-AS links are not supported.



Summary & Next steps

- Proposal strengthens Inter-AS SR TE in the mentioned scenario.
- Request IDR to accept it as wg document



Thank you