BGP Extensions for Inter-AS TE Link Distribution

Jie Dong, M. Chen

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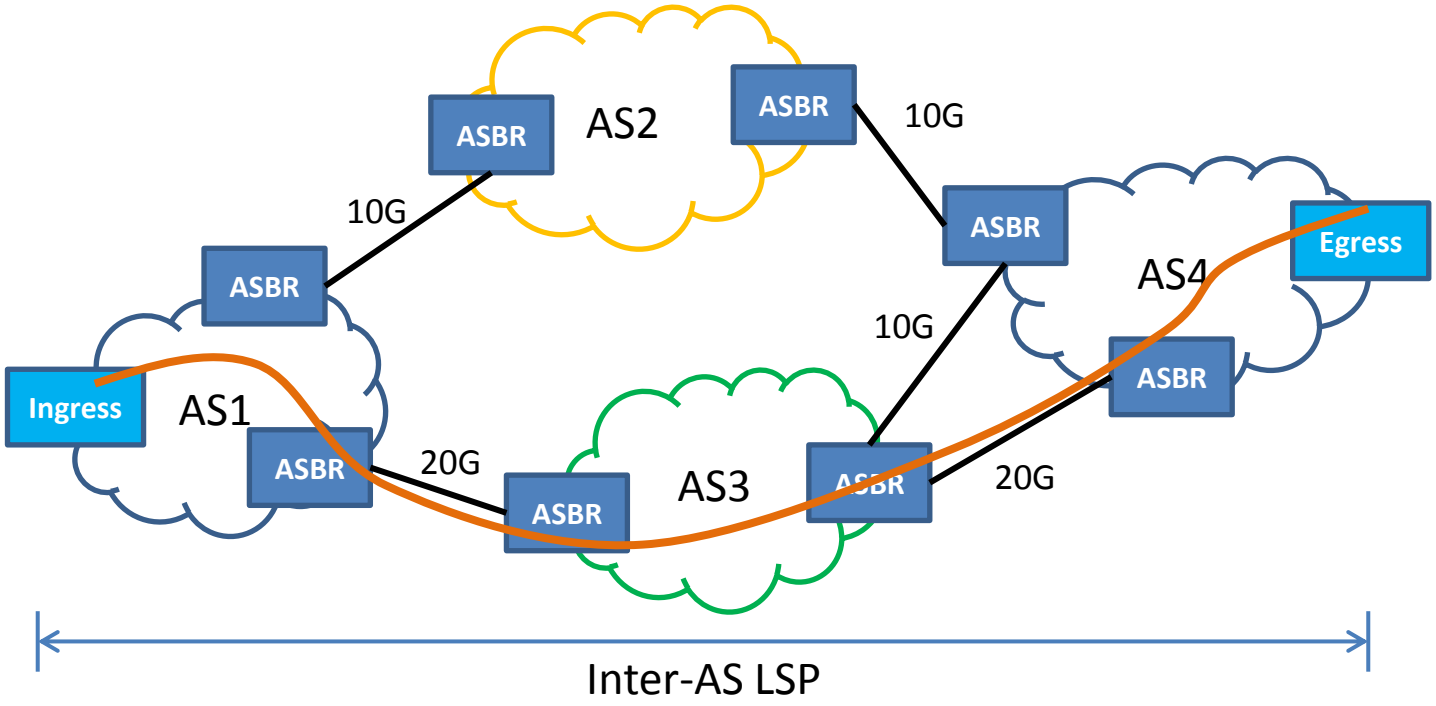
Background

- RFC 5316 and 5392 extend IGPs for Inter-AS TE link information flooding
  - Some information are manually configured
    - Remote ASN, remote ASBR TE ID
  - ‘Proxy’ LSA/LSP for two-way link check
    - Can not specify the Inter-AS TE link attributes accurately
    - Additional complexity and processing overhead

Typical Scenario



- Inter-AS TE LSP requires accurate info of Inter-AS TE links for optimal end-to-end path calculation
- Dynamic exchange of Inter-AS TE link info is needed

Proposed Solution

- Dynamic exchange of Inter-AS TE link info between the adjacent ASes
  - Local/remote ASN
  - Local/remote BGP ID
  - Peering addresses
  - TE link attributes
- By default SHOULD NOT be advertised to other ASes
- Can also be used for north-bound distribution of Inter-AS TE link info under policy control

BGP Extensions

- Link-State NLRI in draft-idr-ls-distribution is extended
  - New protocol ID: Inter-AS
  - New Node Descriptor Sub-TLV: BGP Identifier
- Link NLRI with protocol ID ‘Inter-AS’:
  - Contains Local ASBR ID, Remote ASBR ID, peering link ID
- TE attributes of the Inter-AS link are carried in BGP-LS attribute
  - Bandwidth
  - SRLG
  - …

Next Steps

- Collect feedbacks from WG
- Revise the draft