PIM Join/ Prune Attributes for LISP Environments using Underlay Multicast

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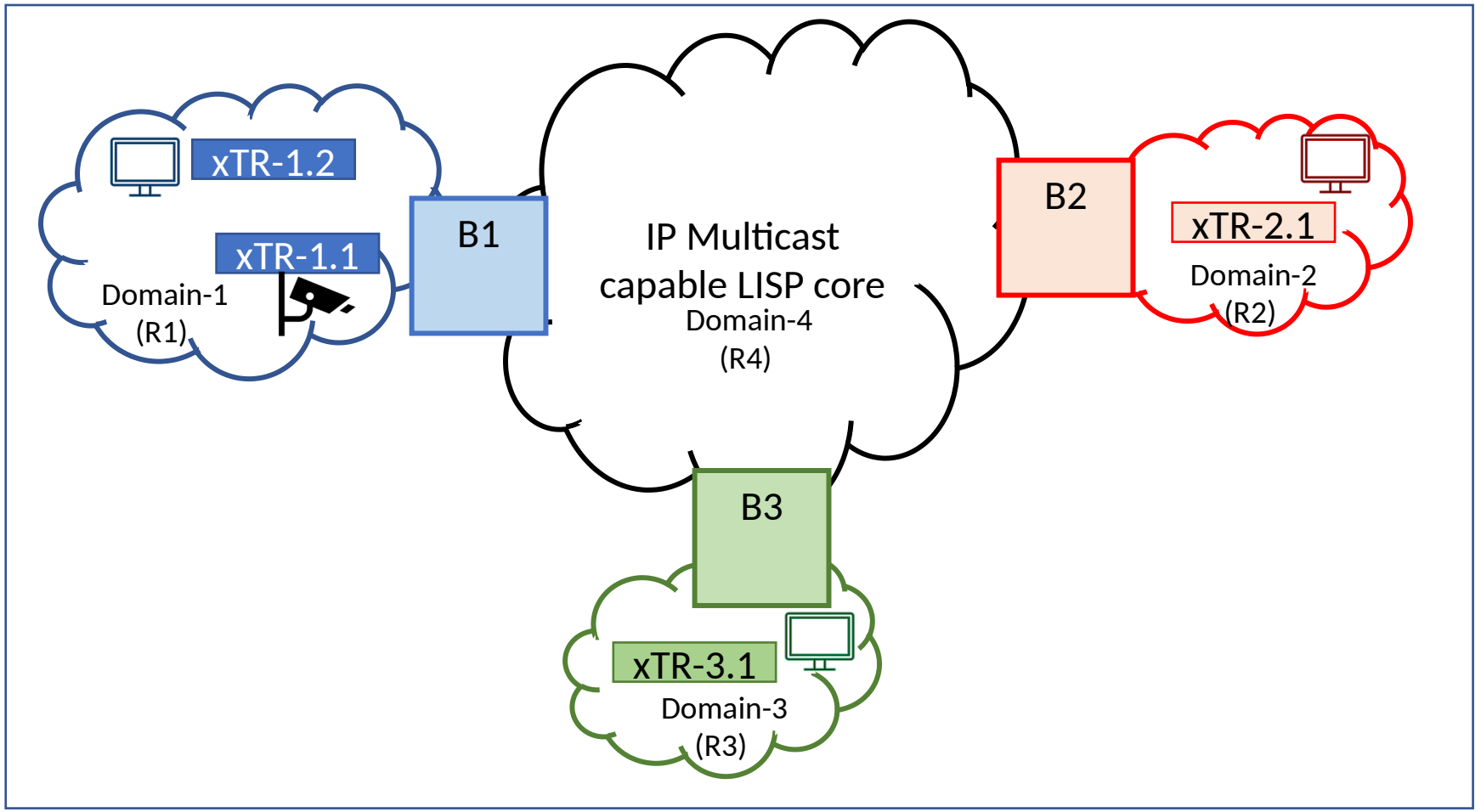
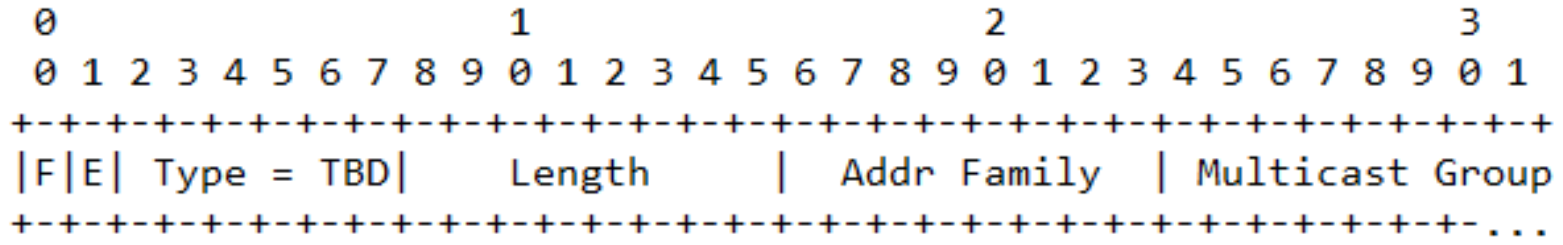
Problem statement

- IP Multicast Source(s) and receiver(s) in different (and same) LISP sites [RFC6831]
  - ASM, SSM and BIDIR modes supported in overlay
- IP-multicast based underlay
- ‘m’ Overlay IP multicast groups mapped to ‘n’ underlay IP multicast groups, where m >> n (Sec 8.1.2 of RFC 6831)
  - Problem compounded for IP multicast flowing across multisite
- Border nodes play a special role:
  - They participate in the PIM signaling of upto three different PIM domains: Two in the underlay and one in the overlay.

Illustration



Receiver ETR Group address TLV



- A new TLV MAY be signaled in the PIM Join/ Prune attribute [RFC8059] [RFC7887].
- Definition of F, E, Type, Length and Address Family same as RFC8059
  - Multicast Group: The underlay group address (G-u) used for transporting the overlay multicast stream to which the downstream router is sending a join
  - The proposed TLV can be appended to the Joined Group Address (Encoded Group format) or the Joined Source Address (Encoded Source format)

Next Steps

- Get comments from WG and work towards WG adoption