Multicast Support for 4rd

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draft-sarikaya-softwire-4rdmulticast-04
4rd Multicast
Motivation

- 4rd IPv6 transition technologies are unicast
- Multicast support approaches for 4rd are needed mainly for MAP-E but also MAP-T & 4rd to enable IPv4 host to have multicast communication over IPv6 network
- draft-sarikaya-softwire-4rdmulticast-04 defines encapsulation for MAP-E and translation for MAP-T & 4rd based multicast support
MAP-T & 4rd Multicast

- Use RFC 2473 for tunneling

IPv6 Network

IPv4 Network

IPv6 packet Payload: IGMP

Multicast Data

IPv4 Multicast Source

IPv4 Multicast Source

IPv4 Multicast Source

IPv4 Multicast Source
Translation Multicast

- On IPv6 network, may use native multicast with MLD

IPv6 Network

IPv4 Network

Group Management Messages in MLD

Multicast Data in IPv6

Multicast user:
IGMP join
CE: MLD join

Multicast source: IPv4 multicast data
BR: IPv6 multicast data

MLD Querier on WAN side
MLD to IGMP translator
IPv4 Network side IGMP/PIM Router

IPv4 multicast user

IPv6

IPv6 Network

4rd CE

4rd BR
Discussion

- MAP-E multicast is based on RFC 2473 encapsulation
- Use Multiple BRs but for different groups, same group use always the same BR
- This provides more scalable solutions
- Eases the avalanche problem
Next Steps

- Propose to add this draft to 4rd set of WG drafts to complete the picture