

Line Identification in RS messages

draft-krishnan-6man-rs-mark-03

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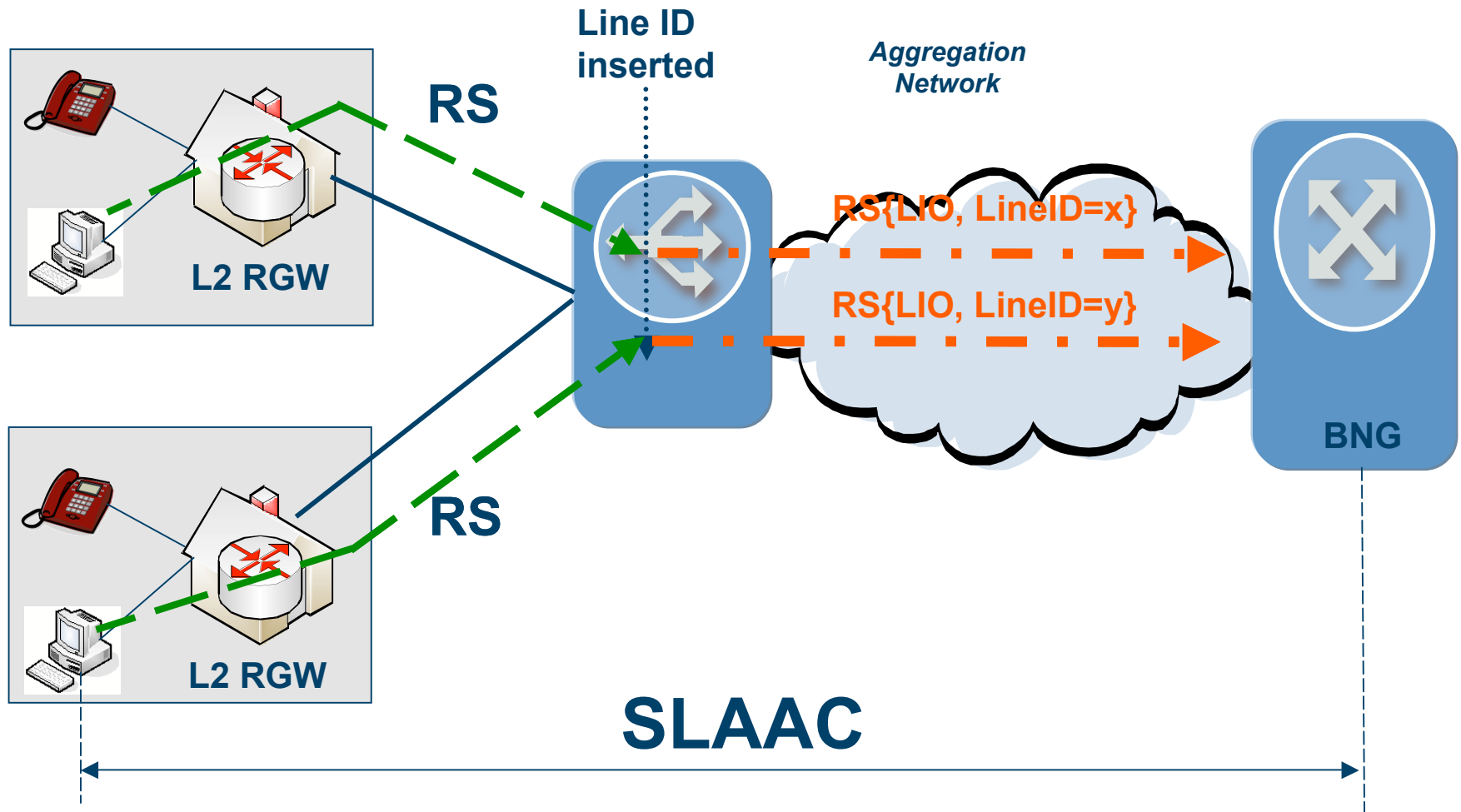
Problem

- Broadband forum supports an n:1 vlan model
 - Multiple subscriber premises on same VLAN
- Edge Router cannot differentiate between multiple subscriber premises
- Edge Router needs to allocate different prefixes for different subscriber premises

Proposed solution

- Edge router needs to be able to identify the subscriber line
- Only node aware of this information is the access node
- The proposed solution
 - Requires the Access Node to mark the RS packets
 - Requires the Edge Router to unicast the RA packets
 - Optionally supports marking of multicast RAs
 - Requires behavior changes on the AN and the edge router

Line ID in Router Solicitations



Changes since last meeting

- Broadband forum network architecture described
- More text added to describe the n:1 vlan model and the associated problems
- Switched default for RAs from multicast with LIO to unicast without LIO.
 - Multicast LIO is still allowed as a MAY. If there are concerns, this can be removed
- Describe interaction with SEND
 - Clarified that LIO is compatible with SEND but cannot be protected by SEND
 - In response to the issue identified by Eric Levy-Abegnoli described the edge router behavior for receiving and sending packets with LIO

Next Steps

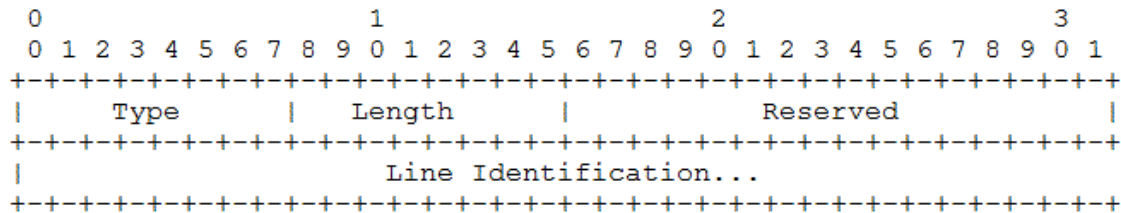
- Line ID insertion in RS has been proposed and accepted at the Broadband forum
- Adopt as wg item?

Backup Slides

Edge Router Behavior (Receiving RS)

- Verifies the ICMPv6 checksum of the router solicitation packet with the LIO option present.
- If the checksum is verified to be valid, the LIO option is removed from the packet
- ICMPv6 checksum is then recalculated
- Packet is sent for SEND verification.

Line Identification Option



Type

8-bit identifier of the type of option. The option identifier for the line identification option will be allocated by the IANA.

Length

8-bit unsigned integer. The length of the option (including the type and length fields) in units of 8 octets. The value 0 is considered invalid.

Line Identification

In a Router Solicitation:

Variable length data inserted by the Access Node describing the subscriber agent circuit identifier corresponding to the logical access loop port of the Access Node from which the RS was initiated.

In a Router Advertisement:

Variable length data inserted by the Edge Router describing the subscriber agent circuit identifier corresponding to the logical access loop port of the Access Node on which the RA needs to be sent out.