Signaling-based configuration for supporting multiple upstream interfaces in IGMP/MLD proxies

draft-contreras-pim-multiif-config-01

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Upstream Selection Mechanisms (draft-asaeda-pim-multiif-igmpmldproxy)

- Static Upstream Interface Selection
  - Channel-Based Selection
  - Subscriber-Based Selection
  - Priority-Based Selection

- Automatic Upstream Interface Selection
  - Signaling-based Upstream Interface Configuration
    - This requires IGMP/MLD extensions <- Scope of this draft!

- Controller-based Upstream Interface Configuration
  - SDN-like centralized control <- work in progress, targeting IETF 119

Proposal: to leverage on the extension mechanism defined in RFC9279
Two aspects to consider

• Policies defined in the IGMP/MLD Proxy for selecting upstream interfaces
  • Specific user (source IP)
  • (S,G)
  • (*,G)
  • (S,*)

• Signaling situations
  • Multicast channel/source state retrieval per upstream interface
  • Multicast channel/source request from one or more upstream interfaces
  • Maintenance of multicast membership on the downstream interfaces including information of the upstream interface used per channel and source
Changes from -00

• Substitution of the term “discovery” by “information retrieval”
  • Fixing both text and figures
• Addition of figures for showing the signaling flows and the usage of the proposed message extensions
Roadmap for the work of supporting of multiple upstream interfaces in IGMP/MLD proxies

- draft-asaeda-pim-multiif-igmpmlldproxy
  - Ask for WG adoption as framework document about the support of multiple upstream interfaces in IGMP/MLD proxies

- draft-contreras-pim-multiif-config
  - Pending ToDo’s
    - Extend the content to IGMP
    - Include content for the include / exclude modes in the extensions of the Report message

- New draft for automation of Upstream Interface Configuration from controllers (i.e., YANG model for support of multiple upstream interfaces in IGMP/MLD proxies)

- Comments are more than welcome