IGMP & MLD Snooping YANG Model

draft-ietf-pim-igmp-mld-snooping-yang-05

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IETF103

Status

- Updated with version 05

  - Updated according to the 2nd round YANG doctor’s review comments

Draft Update Information-1

- Move the igmp-snooping-instance and mld-snooping-instance under the rt:control-plane-protocol (RFC8349).

```
module: ietf-igmp-mld-snooping
  augment /rt:routing/rt:control-plane-protocols/rt:control-plane-protocol:
    +--rw igmp-snooping-instance
    |  +--rw scenario?                              snooping-scenario-type
    |  +--rw enable?                                boolean
    |  …
    +--rw mld-snooping-instance
       +--rw scenario?                              snooping-scenario-type
       +--rw enable?                                Boolean
       …
```

Draft Update Information-2

- Move the statistics under the snooping instance

```
+--rw igmp-snooping-instance
   |  +--rw scenario?                              snooping-scenario-type
   |  +--rw enable?                                Boolean
   …
   +--ro interfaces
   |     +--ro interface* [name]
   |        +--ro name          if:interface-ref
   |        +--ro statistics
   |           +--ro received
   |           |  +--ro num-query?                   yang:counter64
   |           |  +--ro num-membership-report-v1?    yang:counter64
   |           |  +--ro num-membership-report-v2?    yang:counter64
   |           |  +--ro num-membership-report-v3?    yang:counter64
   |           |  +--ro num-leave?                   yang:counter64
   |           |  +--ro num-non-member-leave?        yang:counter64
   |           |  +--ro num-pim-hello?               yang:counter64
   |           +--ro sent
   |              +--ro num-query?                   yang:counter64
   |              +--ro num-membership-report-v1?    yang:counter64
   |              +--ro num-membership-report-v2?    yang:counter64
   |              +--ro num-membership-report-v3?    yang:counter64
   |              +--ro num-leave?                   yang:counter64
   |              +--ro num-non-member-leave?        yang:counter64
   |              +--ro num-pim-hello?               yang:counter64
```

Unsolved problem

- Which name is better? clear-xxx-snooping-groups OR clear-xxx-snooping-caches?

```
rpcs:
    +---x clear-igmp-snooping-groups {rpc-clear-groups}?
    |  +---w input
    |     +---w name?     string
    |     +---w group?    inet:ipv4-address
    |     +---w source?   inet:ipv4-address
    +---x clear-mld-snooping-groups {rpc-clear-groups}?
       +---w input
          +---w name?     string
          +---w group?    inet:ipv6-address
          +---w source?   inet:ipv6-address
```

Next Step

- Apply for WGLC
- Any more comments?

IGMP & MLD Proxy YANG Model

draft-zhao-pim-igmp-mld-proxy-yang-00

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Status

- version 00
  - First version for presentation
  - Effort from multicast yang design team

    （ Ericsson/Volta/Huawei/Juniper ）

Structure

- Augment /if:interfaces/if:interface to configure IGMP & MLD Proxy.

```
augment /if:interfaces/if:interface:
  +--rw igmp-proxy
  |  +--rw enable?                 boolean
  |  +--rw require-router-alert?   boolean {require-router-alert}?
  |  +--rw query-interval?         uint16
  |  +--rw robustness-variable?    uint8
  |  +--rw version?                uint8
  +--rw mld-proxy
     +--rw enable?                 boolean
     +--rw require-router-alert?   boolean {require-router-alert}?
     +--rw query-interval?         uint16
     +--rw robustness-variable?    uint8
     +--rw version?                uint8…
```

Structure

- Augment /rt:routing/rt:control-plane-protocols/rt:control-plane-protocol/igmp-mld:igmp to show the IGMP Proxy group entries.

```
augment /rt:routing/rt:control-plane-protocols/rt:control-plane-protocol/igmp-mld:igmp:
   +--rw proxy
      +--rw source-lifetime?   uint32
      +--ro group* [group-address]
         +--ro group-address    inet:ipv4-address
         +--ro up-time?         uint32
         +--ro filter-mode?     enumeration
         +--ro source* [source-address]
            +--ro source-address          inet:ipv4-address
            +--ro up-time?                uint32
            +--ro upstream-interface?     if:interface-ref
            +--ro downstream-interface*   if:interface-ref
```

```
augment /rt:routing/rt:control-plane-protocols/rt:control-plane-protocol/igmp-mld:mld:
  +--rw proxy
     +--rw source-lifetime?   uint32
     +--ro group* [group-address]
        +--ro group-address    inet:ipv6-address
        +--ro up-time?         uint32
        +--ro filter-mode?     enumeration
        +--ro source* [source-address]
           +--ro source-address          inet:ipv6-address
           +--ro up-time?                uint32
           +--ro upstream-interface?     if:interface-ref
           +--ro downstream-interface*   if:interface-ref
```

Unsolved problem

- Some vendors (eg: Huawei & Juniper) configure igmp-proxy on the upstream interface, but some vendor (eg, Cisco) configures igmp-proxy on the downstream interface. How to deal with it?

Next Step

- Apply for WG adoption
- Welcome more vendors and carriers involved
- Need more comments