IGMP & MLD Snooping
YANG Model

draft-zhao-pim-igmp-mld-snooping-yang-01

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IETF99
Status

• version 01
  – First version for presentation
  – Structure according to IGMP & MLD model. (We have reached a new agreement about the whole structure just now. The draft needs update.)
  – Effort from multicast yang design team
    (Ericsson/Jabil/Huawei/Cisco)
mld-snooping-profile is same as IGMP snooping except changing IPv4 addresses to IPv6 addresses.
Structure

- Prepared to work with other models by profile references

ieee 802.1Q bridge model:
module: ieee-dot1Q-bridge
  +--rw bridge* [name]
    +--rw name dot1Qtypes:nameType
    +--rw igmp-snooping-profile leafref
  +--rw bridge-vlan
    +--rw vlan* [vid]
      |   +--rw vid ieee:vlanid
      |   +--rw igmp-snooping-profile leafref

module: ietf-igmp-mld-snooping
  +--rw igmp-snooping-profile* [name]
    +--rw name string
    +--rw vlan-id? uint16
    +--rw enable? boolean {admin-enable}?
    +--rw forwarding-mode? enumeration
    +--rw explicit-tracking? string
    +--rw send-query? boolean
    +--rw mrouter-aging-time? uint16
    +--rw fast-leave? empty {fast-leave}?
• Pros
  – Can be fully, independently defined
  – Can be augmented
  – Easy references to and from other models
  – Can be adjusted to bridge and VLAN cases
IGMP snooping RPC

Clears the specified IGMP Snooping cache tables.

module: ietf-igmp-mld-snooping

rpcs:
   +---x clear-igmp-snooping-groups {rpc-clear-groups}?
      +---w input
         +---w vlan-id? uint16
         +---w group? inet:ipv4-address
         +---w source? inet:ipv4-address
Unsolved problem

• How to extend igmp-snooping-profile to support VPLS?

• How to define operational state data? (Now I have defined some read-only attributes in the igmp-snooping-profile as operational state data. But we haven't reached an agreement yet.)
Next Step

• Welcome more vendors and carriers involved
• Need more comments