IGMP & MLD YANG Model

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Xufeng Liu (Jabil)
Feng Guo (Huawei)
Mahesh Sivakumar (Cisco)
Pete McAllister (Metaswitch)
Anish Peter (Individual)

IETF100
Status

• version 06
  - Reviewed by WG chairs & yang doctor
  - Updated according to the NMDA version and review comments
  - Passed validations
Updating Yang Model Structure

- Still using three-level hierarchy: Global level, Interface-global, Interface-level
- Every level including configuration and operational state information (except interface-global)

Global Level

- rw import
   - rw global
     - rw enable? boolean (global-admin-enable)?
     - rw max-entries? uint32 (global-max-entries)?
     - rw max-groups? uint32 (global-max-groups)?
     - rw entries-count? uint32
     - rw groups-count? uint32
     - rw statistics
       - rw discontinuity-time? yang:date-and-time
       - rw error
         - rw total? yang:counter64
         - rw query? yang:counter64
         - rw report? yang:counter64
         - rw leave? yang:counter64
         - rw checksum? yang:counter64
         - rw too-short? yang:counter64
     - rw received
       - rw total? yang:counter64
       - rw query? yang:counter64
       - rw report? yang:counter64
       - rw leave? yang:counter64
     - rw sent
       - rw total? yang:counter64
       - rw query? yang:counter64
       - rw report? yang:counter64
       - rw leave? yang:counter64

Interface-level

- rw interface* [interface-name]
  - rw enable? boolean (intf-admin-enable)?
  - rw group-policy? string
  - rw last-member-query-interval? uint16
  - rw max-groups? uint32 (intf-max-groups)?
  - rw max-group-sources? uint32 (intf-max-group-sources)?
  - rw query-interval? uint16
  - rw query-max-response-time? uint16
  - rw require-router-alert? boolean (intf-require-router-alert)?
  - rw robustness-variable? uint8
  - rw source-policy? string (intf-source-policy)?
  - rw verify-source-subnet? empty (intf-verify-source-subnet)?
  - rw explicit-tracking? boolean (intf-explicit-tracking)?
  - rw exclude-lite? boolean (intf-exclude-lite)?
  - rw version? uint8
  - rw join-group* inet:ipv4-address (intf-join-group)?
  - rw sem-map? [source-addr group-policy] (intf-sem-map)?
    - rw group-policy? string
    - rw static-group* [group-addr source-addr] (intf-static-group)?
    - rw group-addr inet:ipv4-address
    - rw source-addr source-ipv4 addr-type
    - rw op-status? enumeration
    - rw querier? inet:ipv4-address
    - rw join-group* inet:ipv4-address (intf-join-group)?
    - rw group-address inet:ipv4-address
    - rw expire? uint32
    - rw filter-mode? enumeration
    - rw up-time? uint32
    - rw last-reporter? inet:ipv4-address
  - rw source* [source-address]
    - rw source-addr inet:ipv4-address
    - rw expire? uint32
    - rw up-time? uint32
    - rw host-count? uint32
    - rw host-reporter? inet:ipv4-address
    - rw source? [host-address] (intf-explicit-tracking)?
    - rw host-address inet:ipv4-address
    - rw host-filter-mode? enumeration
Adding New Features

- lightweight IGMPv3 or MLDv2 protocol referenced RFC5790, i.e. simplified exclude mode function
- Explicit-tracking function for recording host information
Next Step

• Any more comments
• Ready for WGLC