

# IGMP&MLD YANG Model

## draft-liu-pim-igmp-mld-yang-00

Yisong Liu, Feng Guo (Huawei)

IETF 91, Honolulu

# Introduction

- Goal:
  - Define a standardized model for IGMP&MLD configuration, operation and notification
- Use Case:
  - Unified provisioning system between vendors
  - Unified way to collect IGMP&MLD protocol informations (group members, timers, events...)
- For convenience, IGMP&MLD are wholly called GMP

# Main trees : configuration

```
module: gmp
```

```
+--rw gmp
```

```
+--rw gmp-Instances
```

```
+--rw gmp-Instance * [vrfName]
```

```
| ...
```

```
+--rw gmp-SSM-Mappings
```

```
...
```

```
| ...
```

```
+--rw gmp-Interfaces
```

```
+--rw gmp-Interface * [ifName]
```

```
| ...
```

```
+--rw gmp-Static-Groups
```

Instance specific configuration

Ssm-map rule specific configuration

Interface specific configuration

Static group specific configuration

# Main trees : configuration(cont.)

+---rw gmp-Instances

Per-instance configuration

+---rw gmp-Instance\* [vrfName]

+---rw vrfName	string
+---rw addrFamily	enumeration
+---rw queryInterval?	uint32
+---rw queryRspInterval?	uint32
+---rw robustness?	uint32
+---rw lastMemberQueryInterval?	uint32
+---rw reqRouterAlert?	boolean
+---rw sendRouterAlert?	boolean
+---rw othQuerierPstTime?	uint32
+---ro gmpEntryLimit?	uint32
+---rw ipsecName?	string
+---rw ipsecType?	enumeration

# Main trees : configuration(cont.)

```
Per-ssm-map rule configuration
+---rw gmp-SSM-Mappings
|   +---rw gmp-SSM-Mapping
|       +---rw IPV4-ssmmapingGrp   inet:ipv4-address
|       +---rw IPV6-ssmmapingGrp   inet:ipv6-address
|       +---rw isSSMapMask         boolean
|       +---rw IPV4-ssmmapingMask?  inet:ipv4-address
|       +---rw IPV6-ssmmapingMask?  uint32
|       +---rw isMaskLen           boolean
|       +---rw maskLen?            uint32
|       +---rw IPV4-srcAddr        inet:ipv4-address
|       +---rw IPV6-srcAddr        inet:ipv6-address
```

# Main trees : configuration(cont.)

```
+--rw gmp-Interfaces
  +--rw gmp-Interface* [ifName]
    +--rw vrfName      string
    +--rw ifName       ifName
    +--rw addrFamily   enumeration
    +--rw gmpEnable     boolean
    +--rw ipSourcePly?  boolean
    +--rw ipSrcAclName? string
    +--rw ipSrcAclIpv6? string
    +--rw queryInterval? uint32
    +--rw queryRsplInterval? uint32
    +--rw robustness?  uint32
    +--rw version?     uint32
    +--rw lastMemberQueryInterval? uint32
    +--rw requireRouterAlert? boolean
    +--rw sendRouterAlert? boolean
    +--rw othQuerierPresentTime? uint32
    +--rw immediatelyLeave? boolean
    +--rw immLeaveAclName? string
    +--rw immLeaveAclIpv6? string
    +--rw gmpEntryLimit? uint32
    +--rw exceptAclName? string
    +--rw exceptAclIpv6? string
    +--rw ssmapEnable?  boolean
    +--rw groupAclName? string
    +--rw groupAclIpv6? string
    +--rw groupAclGMPVer? uint32
    +--rw queryAclName? string
    +--rw queryAclIpv6? string
    +--rw ipsecName?    string
    +--rw ipsecType?    enumeration
```

## Per-interface configuration

# Main trees : configuration(cont.)

+--rw gmp-Static-Groups

Per-static-group configuration

+--rw gmp-Static-Group

+--rw vrfName string  
+--rw addrFamily enumeration  
+--rw ifName ifName  
+--rw IPV4-staticGrp inet:ipv4-address  
+--rw IPV6-staticGrp inet:ipv6-address  
+--rw isSourceAddr boolean  
+--rw IPV4-sourceAddr? inet:ipv4-address  
+--rw IPV6-sourceAddr? inet:ipv6-address  
+--rw isStepGrpMask boolean  
+--rw IPV4-incStepGrpMask? inet:ipv4-address  
+--rw IPV6-incStepGrpMask? inet:ipv6-address  
+--rw isMaskLen boolean  
+--rw maskLen? uint32  
+--rw totalNum? uint32

# Main trees : operations

- TBD



# Main trees : notifications

- TBD

# Next Steps

- Review on the current proposal model from IGMP&MLD point of view
  - What are the missing informations of configuration?
  - Is the model organization appropriate for implementors?
  - Need to agree on defaults, possibly feature specific containers, conditional leafs...
- Seek some comments and feedback
- Add IGMP&MLD operations and notifications on the current model
- Looking at co-authors