LIME Connection-Oriented OAM Base YANG Model Work Update

draft-ietf-lime-yang-oam-model-03

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Design Goal

- Look for common structure for Connection-Oriented OAM technologies(eg. Trill OAM, MPLS-TP OAM) to provide consistent representation

- Using configuration model to provide consistent configuration and representation

- Using RPC blocks for Connection-Oriented OAM command (e.g.,) to provide consistent reporting and representation.

- Using Notification model to provide consistent reporting and representation.

- Look for better reusability and extensibility.

Document Update of Lime base model: 01 to 02

- Split the lime model into two: Connection-Oriented OAM(this draft) & Connection less OAM(draft-kumar-lime-yang-connectionless-oam)

- Modify some descriptions and use cases to conform to the scope of connection-oriented OAM.

- Change the model name to ietf-conn-oam.

```
module:  ietf-gen-oam  ietf-conn-oam
```

- Remove the identity ipv4 & identity ipv6 from the connection-oriented oam model.

```
identity ipv4 {                         identity ipv6 {
    base technology-types;                  base technology-types;
    description                             description
        "technology of ipv4";                   "technology of ipv6";
}                                       }
```

- Modify the rpc out blocks to make it more general.

```
+--ro output
   +--ro tx-packt-count?     oam-counter32              +--ro output
   +--ro rx-packet-count?    oam-counter32                 +--ro (monitor-stats)?
   +--ro min-delay?          oam-counter32                    +--:(monitor-null)
   +--ro average-delay?      oam-counter32                       +--ro monitor-null?    empty
   +--ro max-delay?          oam-counter32
```

Version 01   Version 02

Document Update of Lime base model: 02 to 03

• Remove the identity icmp-rfc792 from the connection-oriented oam model

```
identity  icmp=rfc792 {
    base  command=sub=type;
    description
        "Defines  the  command  subtypes  for  ICMP  ping";
    reference  "RFC  792";
}
```

• Delete the connectionless oam technologies in the description of technology-types and command-sub-type.

• Change the typedef Interval type to decimal 64 to satisfied the 3.3ms.

```
typedef Interval {
  type uint32;
  units "milliseconds";
  default "1000";
  description
    "Interval between packets in milliseconds.
     0 means no packets are sent.";
}
```

```
typedef Interval{
  type decimal64{
  fraction-digits 2;
}

    units "milliseconds";
  description
  "Interval between packets in milliseconds.
  0 means no packets are sent.";
}
```

• Change the interval to transmit-interval

Usage of Connection-oriented OAM model

- How to extend to technology specific connection-oriented o am?
  - E.g., Trill oam:
    - easy extend to trill oam (draft-ietf-trill-yang-pm-00 & draft-ietf-trill-yang-00)
  - E.g., MPLS-TP oam:
    - mpls-tp oam adopt the MD/MA/MEP's structure
    - Lime connection-oriented yang model can well describe the MPLS-TP OAM structure:
      - Md-name -> Global_ID(Autonomous System Number) ;
        MA-name -> MEG_IDs; MEP-name -> ME_IDs(RFC6370).
    - related YANG models: **draft-zhang-mpls-tp-yang-oam**
    - We will discuss with author of mpls-tp oam yang to make the connection-ori ented oam base model more generic and satisfy the mpls-tp oam's requirem ents.

Next Step

- Fix the open issues raised one the list
- Solicit more comments and reviews on the draft