

LIME Connection-Oriented Model Updates

draft-ietf-lime-yang-oam-model-09

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Activities for CO Model since Seoul Meeting

- WGLC:
 - Most people supported.
 - Also need to address some comments.
- Comments received from WGLC
 - Thanks Gu Rong, Adrian Farrel, and Greg Mirsky’s review and comments,
 - The comments lists are posted :
<https://mailarchive.ietf.org/arch/msg/lime/zxz62rErsQ8LY6dMkqpNo8nyTvM>
https://mailarchive.ietf.org/arch/msg/lime/mIFglh0FlvFDS_5MwqA5oYWWjwY
https://mailarchive.ietf.org/arch/msg/lime/7UXtFIAX7fDXhxrQ2zDLtG_0XrY
- Current Solution Overview :
 - In the document:
 - Fixes Number of NITs, synchronizes terms, corrects clerical errors;
 - Adds some explains to improve the document’s readability;
 - Tweaks some descriptions to avoid confusion;
 - Updates the References Section.
 - In the model:
 - Defines two identities to distinguish the on-demand oam and proactive oam;
 - Defines a “MIP” feature;
 - Defines a MIP list;
 - Changes the rang of the “packet-size”.

Details for Model Update

- Defines two identities
 - On-demand & Proactive

```
identity command-sub-type {  
  description  
    "Defines different rpc command subtypes,  
    e.g rfc6905 trill OAM, this is optional for most cases";  
}
```

```
identity on-demand {  
  base command-sub-type;  
  description  
    "On demand activation - indicates that the tool is activated  
    manually to detect a specific anomaly.";  
}
```

```
identity proactive {  
  base command-sub-type;  
  description  
    "Proactive activation - indicates that the tool is activated on a  
    continual basis, where messages are sent periodically, and errors  
    are detected when a certain number of expected messages are not  
    received.";  
}
```



```
+---x continuity-check {continuity-check}?  
  +---w input  
    +---w technology?          identityref  
    +---w MD-name-string -> /domains/domain/MD-name-string  
    +---w MA-name-string -> /domains/domain/MAs/MA/MA-name-string  
    +---w cos-id?              uint8  
    +---w (ttl)?  
      +---:(ip-ttl)  
        +---w ip-ttl?          uint8  
      +---:(mpls-ttl)  
        +---w mpls-ttl?        uint8  
    +---w sub-type?            identityref  
    +---w source-mep? -> /domains/domain/MAs/MA/MEP/mep-name  
    +---w destination-mep
```

- Changes the rang of the “packet-size”.
 - Modifies the range to "0..10000";
 - Allows to send smaller CC and CV packets.

```
leaf packet-size {  
  type uint32 {  
    range "64..10000";  
  }  
}
```

before



IETF98 Chicago LIME

```
leaf packet-size {  
  type uint32 {  
    range "0..10000";  
  }  
}
```

After

Details for Model Update

- Defines a “MIP” list and feature
 - It allows user to explicit configure the MIPs;
 - Defines the MIP list base on G8013, G8052, etc.
 - MIP attributes includes address, interface, and level.
 - Tags the MIP list with “MIP” feature.

```
module: ietf-conn-oam
  +--rw domains
    +--rw domain* [technology MD-name-string]
      +--rw technology          identityref
      +--rw MD-name-string      MD-name-string
      .....
      +--rw md-level?          MD-level
    +--rw MAs
      +--rw MA* [MA-name-string]
        +--rw MA-name-string    MA-name-string
        .....
        +--rw MEP* [mep-name]
          | +--rw mep-name      MEP-name
          .....
        +--rw MIP* [interface] {mip}?
          +--rw interface        if:interface-ref
          +--rw (mip-address)?
            +--:(mac-address)
            | +--rw mac-address?  yang:mac-address
            +--:(ipv4-address)
            | +--rw ipv4-address?  inet:ipv4-address
            +--:(ipv6-address)
            | +--rw ipv6-address?  inet:ipv6-address
            +--rw ipv6-address?  inet:ipv6-address
          +--rw level?          MD-level
```

```
+---x traceroute {traceroute}?
  +---w input
    +---w MD-name-string  -> /domains/domain/MD-name-string
    +---w MA-name-string  -> /domains/domain/MAs/MA/MA-name-string
    .....
    +---w command-sub-type?  identityref
    +---w source-mep?       -> /domains/domain/MAs/MA/MEP/mep-name
    +---w destination-mep
    .....
  +--ro output
    +--ro response* [response-index]
      +--ro response-index  uint8
      .....
      +--ro destination-mep
      | .....
      +--ro mip {mip}?
        +--ro interface?    if:interface-ref
        +--ro (mip-address)?
          +--:(mac-address)
          | +--ro mac-address?  yang:mac-address
          +--:(ipv4-address)
          | +--ro ipv4-address?  inet:ipv4-address
          +--:(ipv6-address)
          | +--ro ipv6-address?  inet:ipv6-address
          +--ro ipv6-address?  inet:ipv6-address
        +--ro (monitor-stats)?
          +--:(monitor-null)
          +--ro monitor-null?  empty|
```

Next Step

- May prepare a new version base on IETF98 discussion.
- Send it to the IESG for publication.

Address WG Comments

- **[Comments 1]** "remote RDI" is repetitive as RDI (Remote Defect Indication). **[Addressed]**
- **[Comments 2]** I encourage to clearly separate Continuity Check from Connectivity Verification. As I read from the draft, it does not address proactive OAM but only on-demand OAM (I'll comment on my view how these are different below). Thus I'll point that on-demand OAM cannot serve as Continuity Verification OAM since Mis-connection Defect cannot be determined based on on-demand OAM. **[Addressed]**
- **[Comments 3]** I propose the following definitions for proactive and on-demand OAM:
 - proactive OAM method requires persistent configuration
 - on-demand OAM method requires only transient configuration **[Addressed]**
- **[Comments 4]** document refers to globally unique Source MEP ID but has no example, nor explanation how one is constructed. **[Addressed]**
- **[Comments 5]** Maintenance Domain contains two md-levels - one of its own and one in MIP. **[Addressed]**
- **[Comments 6]** not clear why model explicitly refers to mpls-ttl out of all MPLS(-TP) **[Addressed]**
- **[Comments 7]** continuity-check RPC does not use md-level **[Addressed]**
- **[Comments 8]** traceroute RPC does not use md-level **[Addressed]**