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/zzx62rErsQ8LY6dMkqpNo8nyTvM
    https://mailarchive.ietf.org/arch/msg/lime/mIFglh0FlvFDS_5MwqA5oYWWjwY
    https://mailarchive.ietf.org/arch/msg/lime/7UXtFlAX7fDXhrQ2zDLtG_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”.  

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Details for Model Update

- Defines two identities
  - On-demand & Proactive

```yaml
identity command-sub-type {
  description
  "Defines different rpc command subtypes, e.g. rfc6985 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."
}
```

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

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

before

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

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After

```
leaf packet-size {
  type uint32 {
    range "0..10000";
  }
}
```
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-cam
  |--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
  |   |   |   |   |   |   |--rw ipv6-address?  inet:ipv6-address
  |   |   |   |   |--rw level?           MD-level

--- rw traceroute {traceroute}?
  |   |--rw 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
  |   |   .......
  |   |--rw 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
  |   |   |   |   |   |   |   |--ro ipv6-address?  inet:ipv6-address
  |   |   |   |   |   |--ro level?           MD-level
  |   |   |   |   |   |--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]