Connectionless OAM yang model

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Status update since Buenos Aires

• Discussed it in last 2 interim meeting,
  – Edit session for two documents (CO and CL)

• Updated four versions:
  – 03->04, 04->05;
  – Change base on interim comments, Mailing List comments and Mahesh review.

• Defined Two Models to separate data from data retrieval
  – Connection Less OAM Model
  – Connection Less OAM Method Model
Connection-less OAM model

• Test Point Address Group
  – Generic Test Point Address representation

• Tools
  – Describe Toolset for Fault detection and Isolation

• Oam Layers
  – In future, it can provide way to relate Oam Test Points for Connection Less
  – Default Level 0(same layer), so if relationship is not known it’s not required to be implemented
  – Provide OAM Test points to relate to each other as same layer, client layer, and server layer.

• Test Point Locations Group
  – choice per location-type (ipv4-location-type, ipv6-location-type, etc.)
    • Container test-point-xx-location-list
      – Key xx-location
      – Test Point Location Information
        » Tools
        » Oam Layers

• Path Discovery Data
  – Generic grouping for path discovery data

• Continuity check data
  – Generic grouping for continuity check data

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Connection Less OAM Method Model

• RPC
  – Continuity Check
    • Support Reachability Verification
      – Continuity Checks are used to verify that a destination is reachable, and are typically sent proactively, though they can be invoked on-demand as well.
  – Path Discovery / Fault localization
    • Identify nodes along the route to destination Test point
Details of location-type based list

+--rw (location-type)?
  +--:(ipv4-location-type)
    |  +--rw test-point-ipv4-location-list
    |     +--rw test-point-locations* [ipv4-location]
    |     +--rw ipv4-location inet:ipv4-address
    ...
  +--:(ipv6-location-type)
    |  +--rw test-point-ipv6-location-list
    |     +--rw test-point-locations* [ipv6-location]
    |     +--rw ipv6-location inet:ipv6-address
    ...
  +--:(mac-location-type)
  +--:(tunnel-location-type)

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ML discussion Recap

• connectionless OAM model should be limited to continuity check, reachability verification.

• The test-point and many other acronyms should add to Terminology section.

• Some parameters in tool may not appropriate, such as RFC5880, RFC5885, RFC5882, RFC6375, RFC6428.

• The description of the model provided in Section 3 doesn't map to the model hierarchy.

• The oper object should be made clear in the document.

• The IPv4-location and IPv6-location (cc-ipv4-sessions-statistics and cc-ipv6-sessions-statistics) should be collapsed into one.

• Break Model in Two modules Oam Data and Oam Data retrieval Methods

• Does it make sense to present oam-layer in this model?

• Whether it need a pair of source and destination addresses and TLV address?

• Is FEC really an attribute of TP-location?

• Does it really need to enumerate all of the tools?

Agree, and fix in 01 version

Agree, and fix in 04

Discussed in Interim
ML discussion Recap

• Need to complete the “Reference” section
• The “technology” leaf’s type should be an identity-ref rather than string.
• What is the “level”? And how to use it? It need to be explained clearly.
• test-point-ipv4-location-list contains both an ipv4 and an ipv6 address. it need to be considered.
• Long-lived oam session
• Need to optimize the description statements
• The terminology should consistent

Agree, and will fix it

Agree, and have fixed in 04, and 05

Agree, and will fix it
Next Step

• Fix the open issues raised on the list
• Discuss with Netmod use augment or mount the model
• Performance Monitoring to be added as separate draft – Discussed in Interim
Appendix: Model Structure

- **IETF network model**
  - **Domain**
  - **Domain**
  - **ipv4-location-type**
  - **test-point-ipv4-location-list**

- **IETF network model**
  - **vrf**
  - **OAM-layer**
    - **index**
    - **level**

- **Feature:** connectionless
  - **Key:** ipv4-location or ipv6-location or tunnel-location or mac-address-location or ip-prefix-location, etc.

- **Choice:** toolset for fault detection and isolation
  - **toolset:** tools-mpls, tools-bfd, tools-pw, ip-pingtrace

- **Case:** Test point address
  - **tp-address**
    - **FEC**
    - **ipv4-address**
    - **ipv6-address**

References:
- *draft-ietf-i2rs-yang-network-topo*