A YANG Data Model for In-Situ OAM

draft-zhou-ippm-ioam-yang-08

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History

- Initial version:
  - March 2018
- Presented:
  - IETF 101 and 102
- Comments received from
  - Greg Mirsky, Reshad Rahman, Tom Petch
- Several revisions kept aligning with the latest IOAM data draft and IOAM-DEX draft
- The latest version corrected the admin type things
  - References, Copyright, Tree diagrams
Overview

- Profiles
  - The IOAM model is organized as list of profiles.
  - Each profile associates with one flow and the corresponding IOAM information.
  - Multiple IOAM data types can be encapsulated into the same IOAM header.
Preallocated Tracing Profile

- The preallocated tracing option will create pre-allocated space for each node to populate its information.

```plaintext
+-rw preallocated-tracing-profile {preallocated-trace}?
  | +---rw enabled? boolean
  | +---rw node-action? ioam-node-action
  | +---rw trace-types
  |   | +---rw use-namespace? ioam-namespace
  |   | +---rw trace-type* ioam-trace-type
  +---rw enable-loopback-mode? boolean
  +---rw enable-active-mode? boolean
```
Incremental Tracing Profile

- The incremental tracing option contains a variable node data fields where each node allocates and pushes its node data immediately following the option header.

```
+++rw incremental-tracing-profile {incremental-trace}?
  +++rw enabled?        boolean
  +++rw node-action?    ioam-node-action
  +++rw trace-types
    |  +++rw use-namespace?  ioam-namespace
    |  +++rw trace-type*  ioam-trace-type
  +++rw enable-loopback-mode? boolean
  +++rw enable-active-mode? boolean
  +++rw max-length?      uint32
```
Direct Export Profile

- The direct export option is used as a trigger for IOAM nodes to export IOAM data to a receiving entity (or entities).

```plaintext
++rw direct-export-profile {direct-export}?
    ++rw enabled?         boolean
    ++rw node-action?     ioam-node-action
    ++rw trace-types
        | ++rw use-namespace?        ioam-namespace
        | ++rw trace-type*           ioam-trace-type
    ++rw enable-loopback-mode?    boolean
    ++rw enable-active-mode?     boolean
    ++rw flow-id?              uint32
```
Proof of Transit Profile

- The IOAM Proof of Transit data is to support the path or service function chain verification use cases.
- It’s imported from “I-D.ietf-sfc-proof-of-transit”
Edge to Edge Profile

- The IOAM edge to edge option is to carry data that is added by the IOAM encapsulating node and interpreted by IOAM decapsulating node.
Next

- Comments?
- How about adopting this draft as the starting point for IOAM configurations?
Thank You