On-path Telemetry YANG Data Model

draft-fz-ippm-on-path-telemetry-yang-01

Bangkok, Mar 2025, IETF 122

Giuseppe Fioccola
Tianran Zhou
Huawei

On-path Telemetry YANG Data Model

This document proposes a YANG data model for monitoring on-path telemetry information.

```
module: on-path-telemetry

  +--ro on-path-telemetry-data
    +--ro timestamp?                    yang:date-and-time
    +--ro interface*                    [if-name]
      +--ro if-name                     if:interface-ref
      +--ro profile-name                string
      +--ro filter
      |  +--ro filter-type?             telemetry-filter-type
      |  +--ro ace-name?                -> /acl:acls/acl/aces/ace/name
      +--ro protocol-type?              telemetry-protocol-type
      +--ro node-action                 telemetry-node-action
      +--ro period?                     uint64
      +--ro period-number?              uint64
      +--ro flow-mon-id?                uint32
      +--rw method-type?                altmark-method-type
      +--ro altmark-loss-measurement?
      |  +--ro in-traffic-pkts?         yang:counter64
      |  +--ro out-traffic-pkts?        yang:counter64
      |  +--ro in-traffic-bytes?        uint64
      |  +--ro out-traffic-bytes?       uint64
      +--ro altmark-delay-measurement?
      |  +--ro pkts-timestamps?         yang:date-and-time
      |     +--ro pkt-timestamp?        yang:date-and-time
      +--ro path-delay?
      |  +--ro path-delay-mean          uint32
      |  +--ro path-delay-min           uint32
      |  +--ro path-delay-max           uint32
      |  +--ro path-delay-sum           uint64
      +--ro ioam-incremental-tracing    ioam-trace-data
      +--ro ioam-preallocated-tracing   ioam-trace-data
      +--ro ioam-direct-export          ioam-trace-data
      +--ro ioam-proof-of-transit       ioam-pot-data
      +--ro ioam-edge-to-edge           ioam-e2e-data
```

The "on-path-telemetry-data" contains the detailed information for AltMark and IOAM telemetry data.

Application Scenario

RFC8641 subscription model

- For example, network telemetry updates can be subscribed to and obtained through on-change or periodic notifications to get real-time performance data.

Changes from -00 to -01

The last version addressed some inputs about the model parameters

Comments received from Xiaoming He:

- Proposal to add the sequence-number under “altmark-delay-measurement” to handle the case of multiple double-marked packets in the same period
- While the “period-number” is already included

Review from Thomas Graf:

- YANG module is already in good shape
- Editorial changes to address in the next revision

Next Steps

Evaluate WG Adoption.

Comments are welcome!

Thank You