STAMP Extensions for Hop-by-Hop OAM Data Collection

draft-wang-ippm-stamp-hbh-extensions-04

San Francisco, Jul 2023, IETF 117

Tianran Zhou
Giuseppe Fioccola
Huawei

Gyan Mishra
Verizon

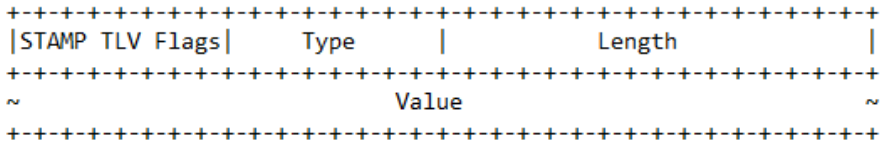
Hongwei Yang
China Mobile

Chang Liu
China Unicom

STAMP Extensions for HbH PM

- STAMP (RFC8762) enables active measurements of one-way and round-trip performance between a Sender and a Reflector.
  - However, the performance of intermediate nodes and links is not available.
  - If we want to measure the performance hop-by-hop, a STAMP test session is required for every intermediate node, which increases the complexity.

- This document introduces optional TLVs to STAMP, in order to enable HbH performance measurement at each intermediate node and link.



TLV Format in a STAMP Extended Packet as per RFC8972

- The information is collected in the TLV at each intermediate node and then sent back by the Reflector to the Sender
  - HbH Timestamp Information TLV: It records the ingress and egress timestamp at every intermediate node.
  - HbH Direct Loss TLV: It records the number of test packets received and transmitted by every intermediate node.
  - HbH Bandwidth Utilization TLV: It records the ingress and egress BW Utilization at every intermediate node.
  - HbH Interface Errors TLV: It records the errors detected on the interface of every intermediate node used to receive the test packets.
  - IOAM-Tracing-Data TLV: it can be used to carry back the forward IOAM data, if IOAM is activated on a specific encapsulation (e.g. IPv6).

- Note that the TLVs can be activated selectively according to the need.

Thank You

Comments are welcome!