TWAMP Light Extensions for Segment Routing Networks

draft-gandhi-ippm-twamp-srpm-00

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Agenda

- Requirements and Scope
- History of the Draft
- Summary
- Next Steps

Requirements and Scope

Requirements:

- Delay and Loss Performance Measurement (PM)
  - ✓ Links and End-to-end P2P/P2MP SR Paths
  - ✓ Applicable to SR-MPLS/SRv6 data planes
- Support stand-alone direct-mode loss measurement

Scope:

- RFC 5357 (TWAMP Light) defined probe messages
- User-configured IP/UDP path for probe messages

History of the Draft

- Feb 2019
  - Draft was published - *draft-gandhi-spring-twamp-srpm-00*
- Mar 2019
  - Presented *draft-gandhi-spring-twamp-srpm-00* at IETF 104 Prague in SPRING WG
- July 2019
  - Presented *draft-gandhi-spring-twamp-srpm-01* at IETF 105 Montreal in IPPM WG
    - Slide 9 Titled - Applicability of STAMP
- Nov 2019
  - SPRING Chairs announced in the meeting the agreement with IPPM chairs to progress the draft in SPRING WG
  - Presented *draft-gandhi-spring-twamp-srpm-04* at IETF 106 Singapore in SPRING WG
- Mar 2020
  - Moved STAMP support to *draft-gandhi-spring-**stamp**-srpm-00*
  - Keep TWAMP Light support as informational in *draft-gandhi-spring-**twamp**-srpm-08*
- Jul 2020
  - Presented *draft-gandhi-spring-twamp-srpm-09* at IETF 109 in IPPM WG
- October 2020
  - Split draft into *draft-gandhi-**spring**-twamp-srpm-11 and draft-gandhi-**ippm**-twamp-srpm-00*

TWAMP Light Control Code Field

In a Query: Sender Control Code

0x0: Out-of-band Response Requested.
This is also the default (current) behavior.

0x1: In-band Response Requested.
Indicates that this query has been sent over a bidirectional path and the probe response is required over the same path in the reverse direction.

0x2: No Response Requested.

- With this, the reflector node does not require any additional SR state for PM (recall that in SR networks, the state is in the probe packet and signaling of the parameters is avoided).
- Also applicable to non-SR paths.

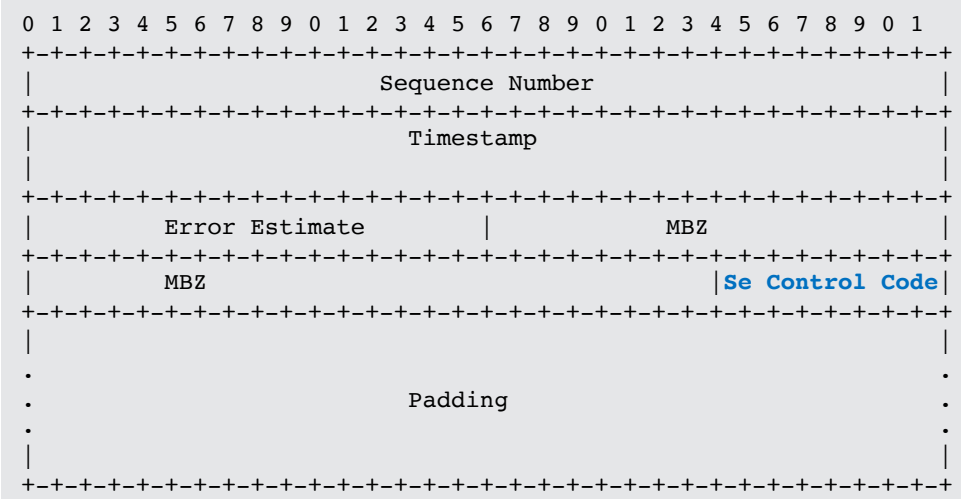
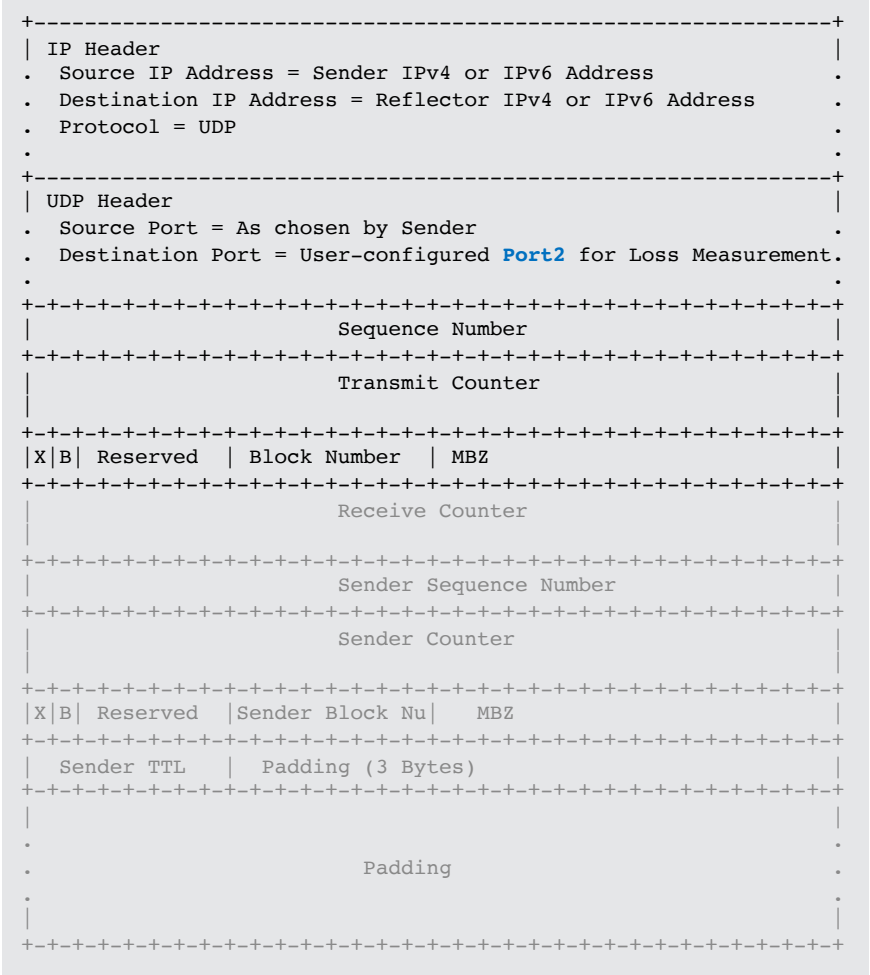


Figure: Control Code in TWAMP Light Query Message

Stand-alone Direct-mode LM Message Format for TWAMP Light

- Stand-alone Direct-mode Loss Measurement (LM) message defined
  - Hardware efficient counter-stamping
    - Well-known locations for transmit and receive traffic counters
  - Stand-alone LM message, not tied to DM
- Direct-mode LM message format is also defined for authenticated mode
- User-configured destination UDP **Port2** is used for identifying LM probe packets
- Does not modify existing TWAMP Light (which is for DM) procedure as different destination UDP is used for LM



Next Steps

- Welcome your comments and suggestions
- Implementation exists
- Request IPPM WG adoption

Thank you