Simple Two-way Active Measurement Protocol (STAMP) Extensions

draft-ietf-ippm-asymmetrical-pkts

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Post WG LC Updates

- Welcome Will Hawkins
- Denser Reflected Test Packet Control TLV
- Conformance Reflected Test Packet – a new STAMP TLV flag
- A Session-Reflector handling of the requested excessive flow of reflected packets
- Operational Consideration for Performing Rate Measurements
- Expanded Security Considerations
- Implementation Status

Denser Reflected Test Packet Control TLV

```
 0                   1                   2                   3
 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|STAMP TLV Flags|     Type      |             Length            |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|Length of the Reflected Packet |Number of the Reflected Packets|
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|             Interval Between the Reflected Packets            |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
~                            Sub-TLVs                           ~
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

Why Do We Need the Conformance Packet STAMP TLV Flag

- A combination of the parameters in Reflected Test Packet Control TLV may be not supportable by the Session-Reflector:
  - Calculated length of the reflected test packet exceeds MTU
  - Excessive rate of reflected test packets
  - Excessive volume of reflected test packets
- The abovementioned conditions SHOULD be considered when performing In-Service rate measurement by gradually increasing data rate and data volume

Implementation Status

- Kudos to Will Hawkins for his invaluable work on the Teaparty open source implementation of STAMP
- The implementation is interoperable with Junos OS Evolved STAMP/TWAMP Light
- Nokia's TWAMP Light
- Cujo's TWAMP Light
- Coverage:
  - RFC 8762
    - Session-Sender, Session-Reflector
    - Authenticated, Unauthenticated modes
    - 9 standardized and to-be standardized extensions

Next steps

Ready for the write-ups

Thank You!