Simple TWAMP (STAMP) Extensions for Segment Routing Networks

draft-ietf-ippm-stamp-srpm-01

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Agenda

- Updates in Revision 00 and 01
- STAMP-based Work in other WGs
- Next Steps
Updates in Revision 00:

- Newly adopted by the IPPM WG
- Addressed various review comments received during the WG adoption
  - Updated Security Section
  - Introduced New Error Flag D (Wrong Destination)
  - Node Address TLV format changed
  - Clarified TLV applicability to P2P vs. P2MP paths
  - Various clarifications
Updates in Revision 01:

- Security Section:
  - "man-in-the-middle" (MIM) might break the assumption "normally" and must be considered.
  - Deployed in limited domains
- When Session-Sender test packet destination address is different than the actual Session-Reflector address, the actual STAMP Session-Reflector address **MUST** be transmitted to the Session-Reflector with the Destination Node Address TLV.
- IANA Section: Add STAMP TLV Flag
  - Error Flag D (Wrong Destination)
- Minor editorial changes
STAMP-based Work in other WGs

- draft-ietf-spring-stamp-srpm-01
- Performance Measurement Using Simple TWAMP (STAMP) for Segment Routing Networks
  - Adopted by the SPRING WG
  - Addressed various review comments received during WG adoption
  - Discussions on whether informational or standards track document
  - Welcome your review comments and suggestions

- draft-gandhi-mpls-stamp-pw-00
- Encapsulation of Simple TWAMP (STAMP) for Pseudowires in MPLS Networks
  - New individual draft in the MPLS WG
  - Welcome your review comments and suggestions
Next Steps

• Welcome your comments and suggestions
Thank you
Backup
STAMP Destination Node Address TLV

**Destination Node Address TLV (value TBA1):**

- Indicates the address of the intended destination of the Session-Sender test packet
- MUST be included when Session-Sender test packet is sent with IPv4 destination address in 127/8 range or Flow Label with IPv6 address ::1/128 (e.g. sweeping ECMP paths)
- Session-Reflector that supports this TLV, MUST transmit reply test packet with Error D (Wrong Destination) in the STAMP TLV Flags field if it is not the intended destination of the received Session-Sender test packet

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**Figure: Destination Node Address TLV Format**

```
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 = TBA1 |       Length                   |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                          | Address               |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```
**STAMP Return Path TLV**

Return Path TLV (value TBA2) to carry Sub-TLV:

Return Path Sub-TLV Types:
- Type (value 1): Return Path Control Code. Reply test packet based on the control code flags:
  - 0x0: No Reply Requested
  - 0x1: Reply Requested on the Same Link
- Type (value 2): Return Address. Destination address for the reply; different than the Source Address in the Session-Sender test packet
- Type (value 3): SR-MPLS Label Stack of the Return Path
- Type (value 4): SRv6 Segment List of the Return Path
Thank you