

Simple Two-way Active Measurement Protocol (STAMP)

Extensions

draft-ietf-ippm-stamp-option-tlv

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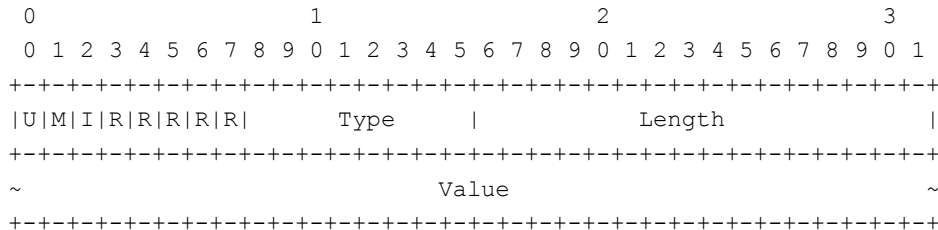
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Update

- WG LC (many thanks to Rakesh Gandhi)
- AD review
- IETF LC (SecDir and GenART)
- IESG reviews

TLV Format Update



- U (Unrecognized) is a one-bit flag. A Session-Sender MUST set the U flag to 1 before transmitting an extended STAMP test packet. A Session-Reflector MUST set the U flag to 1 if the Session-Reflector has not understood the TLV. Otherwise, the Session-Reflector MUST set the U flag in the reflected packet to 0.
- M (Malformed) is a one-bit flag. A Session-Sender MUST set the M flag to 0 before transmitting an extended STAMP test packet. A Session-Reflector MUST set the M flag to 1 if the Session-Reflector determined the TLV is malformed, i.e., the Length field value is not valid for the particular type, or the remaining length of the extended STAMP packet is less than the size of the TLV. Otherwise, the Session-Reflector MUST set the M flag in the reflected packet to 0.
- I (Integrity) is a one-bit flag. A Session-Sender MUST set the I flag to 0 before transmitting an extended STAMP test packet. A Session-Reflector MUST set the I flag to 1 if the STAMP extensions have failed HMAC verification. Otherwise, the Session-Reflector MUST set the I flag in the reflected packet to 0.
- R - reserved flags for future use. These flags MUST be zeroed on transmit and ignored on receipt.

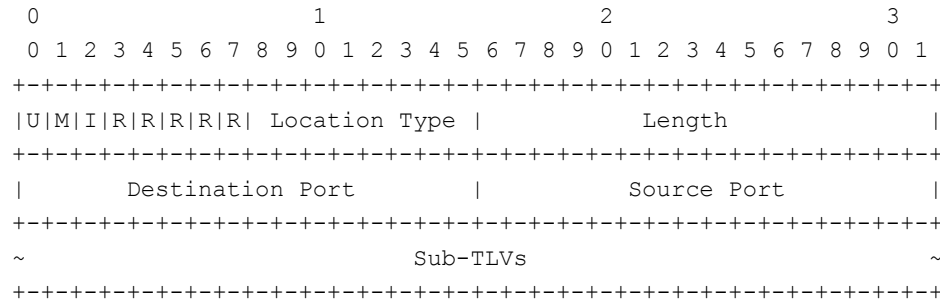
Further TLV updates

- Extra Padding - SHOULD be filled by a sequence of a pseudo-random numbers. The field MAY be filled with all zeros. An implementation MUST control the type of filling of the Extra Padding field.
- Timestamp TLV – re-defined as the variable-length TLV and added Optional sub-TLVs
- Added the value of the Sequence Number field in the STAMP base packet (Session-Sender and Session-Reflector) to improve the integrity protection of STAMP extension
- Clarified the use of the HMAC TLV and, especially, when the HMAC verification fails
- Several updates in the IANA Considerations

Location TLV

- NAT64 case – a Session-Sender and Session-Reflector may use IP addresses of different family. Also, possible use of EUI-64.

- Location TLV is a variable-length TLV.



- Sub-TLVs defined:
 - Source MAC Address, Source EUI-48 Address, Source EUI-64 Address – 12-octet-long sub-TLV.
 - Destination IP Address, Destination IPv4 Address, Destination IPv6 Address – 20-octet-long sub-TLV.
 - Source IP Address, Source IPv4 Address, Source IPv6 Address – 20-octet-long sub-TLV.
 - A Session-Sender includes Source MAC Address, Destination IP Address, Source IP Address.
 - A Session-Reflector uses
 - Source EUI-48 Address,/Source EUI-64 Address
 - Destination IPv4 Address/Destination IPv6 Address
 - Source IPv4 Address/Source IPv6 Address

Next steps

- Finish updates
- Clear DISCUSSes
- Address COMMENTS
- Sync with IANA
- Ready for RFC Editor