# Options for Session ID and Control Code for STAMP Message Format

draft-gandhi-spring-twamp-srpm-07 draft-ietf-ippm-stamp-option-tlv-03

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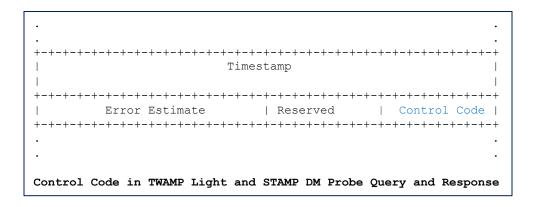
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### TWAMP Light and STAMP Control Code Field

#### For a Query:

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

Ox1: 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. The bidirectional path does not have to be an SR path.



#### For a Response -> Need to return Errors

Ox1: Error - Invalid Message. Indicates that the operation failed because the received query message could not be processed.

0xN: Additional Error will be defined in future

Consistency across TWAMP Light and STAMP DM and LM messages

#### Option 1: Variable Length Session ID Part of Existing Sequence Number

```
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
                         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
Session ID / Sequence Number
                                 Sequence Number
Timestamp
                                  Timestamp
Control Code
   Error Estimate
                 Control Code
                            Error Estimate
Receive Timestamp
                         MBZ (28 octets)
                           Sender Session ID / Sender Sequence Number
                         Session-Sender Timestamp
                         Session-Sender Error Estimate
                         Ses-Sender TTL
Figure: Sender Message Format in STAMP
                              Figure: Reflector Message Format in STAMP
```

- ✓ Control Code compatible with TWAMP Light message format
- ✓ No change for Session ID in both message formats STAMP and TWAMP Light

#### Option 2: 24-Bit Session ID Field

```
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
                        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
Sequence Number
                                Sequence Number
Timestamp
                                Timestamp
Control Code
                                         Control Code
   Error Estimate
                           Error Estimate
Session ID
                                 Receive Timestamp
MBZ (24 octets)
                           Sequence Number
                        Session-Sender Timestamp
                        Session-Sender Error Estimate
                        Session-Sender Session ID
                        |Ses-Sender TTL |
Figure: Sender Message Format in STAMP
                            Figure: Reflector Message Format in STAMP
```

- ✓ Control Code compatible with TWAMP Light message format
- ✓ Session ID has 24-bits which is good

#### Option 3: 32-bit Session ID in TLV

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 Sequence Number Timestamp Error Estimate Control Code MBZ (28 octets) Session ID Type Session ID Figure: Sender Message Format in STAMP

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 Sequence Number Timestamp Error Estimate Control Code Receive Timestamp Session-Sender Sequence Number Session-Sender Timestamp Session-Sender Error Estimate Ses-Sender TTL Session ID Type Session ID Figure: Reflector Message Format in STAMP

- ✓ Control Code compatible with TWAMP Light message format
- ✓ Session ID has 32-bits which is good
- ✓ Session ID is not needed for TWAMP Light, so this option is also fine

#### Option 4: 16-bit Session ID

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 Sequence Number Timestamp Error Estimate Session ID MBZ (28 octets) Control Code Type Control Code Figure: Sender Message Format in STAMP

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 Sequence Number Timestamp Error Estimate Session ID Receive Timestamp Session-Sender Sequence Number Session-Sender Timestamp Session-Sender Error Estimate Ses-Sender TTL Control Code Type Control Code Figure: Reflector Message Format in STAMP

- ✓ Control Code NOT compatible with TWAMP Light message format
- ✓ Session ID has only 16-bits
- Message formats for TWAMP Light and STAMP diverge TWAMP Light also needs Control Code
- ✓ This option may be least favorable

## Next Steps

- Converge on an option suitable for both TWAMP Light and STAMP
  - Keep the two message formats compatible as much as possible (excluding trailing padding)
- Update both drafts with the agreed option

# Thank you