LISP Telemetry

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Sneak Preview

- LISP xTRs can characterize performance of the underlay
- And make RLOC selection based on measured data
- RTT estimates on encapsulating xTRs already used today
- If decapsulating xTRs participate, more performance data is available to make better informed decisions

Potential Telemetry Data

- Packet Count - the number of packets received within a given time window between the encapsulating xTR and decapsulating xTR.
- Byte Count - the number bytes summed from all packets received within a given time window between the encapsulating xTR and decapsulating xTR.
- Packet Rate - the rate in packets per second an encapsulating xTR is sending encapsulated packets to a decapsulating xTR.
- Bit Rate - the bit rate per second an encapsulating xTR is sending encapsulated packets to a decapsulating xTR.
- Bandwidth - the amount of bandwidth used between encapsulating xTR and decapsulating xTR in bytes per second.
- Packet Loss - the number of packets lost within a given time window between the encapsulating xTR and decapsulating xTR.
- Packet Jitter - the amount of inter-packet time for a train of packets within a given time window between the encapsulating xTR and decapsulating xTR.
- Forward Hop-Count - the number underlay router hops from the encapsulating xTR to the decapsulating xTR.
- Forward One-Way Latency - the amount of time from the encapsulating xTR to the decapsulating xTR. Available when a universal clock and rough time synchronization is available.
- Reverse TTL - the TTL value a decapsulating xTR is using for the RLOC-probe Map-Reply. This is used to compute the return or Reverse Hop-Count or number of underlay router hops between the decapsulating xTR and encapsulating xTR.
- Reverse Timestamp - the universal clock timestamp when the decapsulating xTR sent the RLOC-probe Map-Reply message. This is used to compute the return or Reverse One-Way Latency between the decapsulating xTR to the encapsulating xTR.

Draft Contents

- Early versions of draft:
  - Define the type and format of telemetry data and how it is distributed
- Later versions of draft:
  - Describe how telemetry measurement will be performed

Questions?