Aggregation Trace Option for In-situ Operations, Administration, and Maintenance (IOAM)
draft-cxx-ippm-ioamaggr-00

https://datatracker.ietf.org/doc/draft-cxx-ippm-ioamaggr/
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Motivation

• IOAM allows to collect certain telemetry data across hops along a path
  • Different options are defined to cater to different use cases: e.g. path tracing, postcard telemetry, proof-of-transit
  • Any processing of data occurs off-line
  • Issues to contend with: packet size (data records * n hops), need for correlation, ...

• We propose a new option: Aggregation Trace Option
  • Aggregate data during traversal: min, max, sum, average*
  • Very simple operations (comparison, addition, increment)
    \[
    \text{Aggregate[hop}_i\text{]} := \text{function (Aggregate[hop}_{i-1}], data item)}
    \]
  • Use cases
    • Identify a bottle neck
    • Calculate complete cost (e.g. delay) incurred across the path
    • Take a local action depending on aggregate (e.g., if average exceeds a limit)

• Limited+fixed packet overhead, reduced data volume, greater network intelligence
Overview + next steps

• We believe this complements IOAM nicely and addresses an important gap
• IPPM seems to be the right landing spot
• Interested? Comments? Questions? Please contact us

Use for min, max to identify bottleneck or for debug info in case of errors
Use to calculate average from sum

want to generalize beyond current IOAM params

min, max, sum
THANK YOU!
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