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Aggregation Trace Option for In-situ Operations, Administration, and Maintenance (IOAM)

draft-cxx-ippm-ioamaggr-00

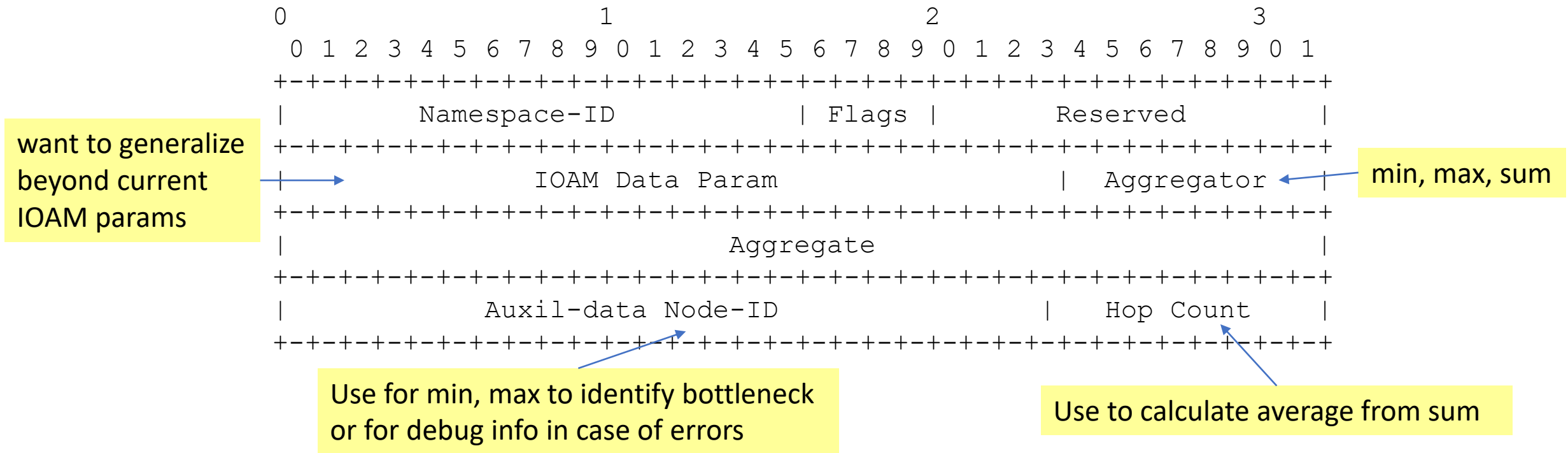
<https://datatracker.ietf.org/doc/draft-cxx-ippm-ioamaggr/>

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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)
Aggregate[hop_i] := 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

THANK YOU!

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