Precision Availability Metrics for SLO-Governed End-to-end Services
draft-ietf-ippm-pam

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IETF-116, March 2023
Precision Availability Metrics

• Observation #1: SLOs are key – you need to count what counts
  – Critical performance metrics reflected a set of SLOs
  – In some use cases, the complete history of each SLO is not needed
  – Capturing violations (and asserting their absence) is often sufficient
    (and more efficient to retain)

• Observation #2: Analogy between service and system failures
  – Inability to deliver contracted SLOs is a failure
  – Precision Availability is a form of availability

(of course, these matter too)
Update

• Addressed comments received in the course of the WG AP
• Introduced Violated Packets Count/Severely Violated Packets Count
• Worked through and resolved discussion Items
• Editorial updates
VPC & SVPC

- Intended to maintain counts of packets for which a performance threshold is violated
- May be used, for example, to distinguish between cases in which violated intervals are caused by isolated violation occurrences or by extensive violations across multiple packets
- Can be compared with the overall amount of traffic to facilitate assessing compliance with statistical SLOs
PAM Policy vs PAM Configuration Settings

• Severity of violations (e.g. presence of threshold levels), availability status (in case of successive violations) may be dependent on operator practices.

• Such setting should not be “hard coded” but customizable/configurable

• These settings can be deemed to constitute a “PAM policy” earlier, but policy is a big and overloaded term

• Resulting from that conclusion – changed the terminology from “PAM policy” to “PAM configuration settings”
Future work, new documents (outside scope here):

- **YANG data model:**
  - to control a PAM-capable system
  - to retrieve PAM metrics
- **IPFIX Informational Elements**
- **Statistical SLOs, e.g., histogram and/or bucket**
- **Additional second-order metrics, e.g., “longest disruption of service time”**

Incorporated with clarifications:

- PAM configuration settings
- Considerations to implement an availability state model (itself out of scope)
Next steps

• Welcome comments, questions
• As discussion items have been resolved, WG LC?

Thank you