Registry for Performance Metrics

draft-manyfolks-ippm-metric-registry-00

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Scope

- This draft defines a Registry for IETF performance metrics
- The registry will be composed by several sub-registries that will actually contain the allocations
  - Active metric sub registry (see next presentation)
  - Passive metric sub registry (see the one after that)
  - Others may come in the future (hybrid, endpoint,..)
- This draft:
  - Creates the Performance metrics registry itself
  - Defines the common columns for all the sub registries in the Performance metrics registry
  - Defines the guidelines for allocations

Motivations & design considerations

- Interoperability: The primary use of the registry is to manage a namespace for its use in a protocol
  - Control protocol to request to perform a measurement (e.g. LMAP FW)
  - Report protocol to report measurement results

Motivations & design considerations

- Criteria for registered metrics: not desirable to create entries for all possible metrics. The registered metrics should be:
  - Interpretable by the user (meaningful and useful)
  - Implementable by the software designer
  - Deployable by the operator
  - Accurate/well defined and scoped
- Expert review allocation policy

Motivations & design considerations

- Single point of reference for the IETF and for the industry
- Several WGs define performance metrics: IPPM, XRBLOCK, IPFIX, BMWG, PMOL and others will
- This registry serves as a single point of reference for metrics
  - So that the industry and the IETF can find a list of relevant metrics defined in the IETF
  - For the IETF to avoid redefinition of similar metrics in different WGs.

Motivations & design considerations

- Several subregistries
- Different columns required for active and passive
  - E.g. Active packet stream distribution versus passive packet sampling distribution

Common columns

- Performance metric identifier
  - 16-bit integer
- Performance metric name
  - must describe the Metric and its usage context
  - should be unique within the whole Registry
  - must use capital letters for the first letter of each component
  - must use '_' between each component
  - must start with prefix Act_ or with Pass_
  - Example Act_UDP_Latency_Poisson_99mean
    - Active metric UDP latency metric using a Poisson stream of packets and producing the 99th percentile mean as output.

Common columns

- Performance metric status
  - Current or deprecated
- Performance metric requester
- Performance metric revision number
- Performance metric revision date
- Performance metric description
- Performance metric specification

Guidelines for registry operation

- Proposing a new metric
- Review from the expert group
- Revising registered metrics
- Deprecating registered metrics