Configuration Data Model for IPFIX and PSAMP

draft-ietf-ipfix-configuration-model-05

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WGLC

▶ We received four valuable reviews (Atsushi, Andrew, Lothar, Brian)
- Thank you very much!

▶ Changes to the text:
- missing terms in terminology overview added
- explanation of UML class diagrams extended

▶ Changes wrt/ Selection Process configuration:
- input of Selection Process restricted to single Observation Point

Changes wrt/ Cache configuration

► **Terminology**: Definition of Cache clarified (especially regarding PSAMP case)

► Cache **input**: selected packets of one or multiple Observation Domains
  - consistent with IPFIX MIB
  - but MUST not aggregate packets of multiple ODs
    ➔ clarifying note will be added to -06

► Clarified handling of **fields which are not available**, for example:
  - `Any other field specified by the CacheLayout MAY only be included in the Packet Report if it is obvious from the field value itself or from the values of other fields in same Packet Report that the field value was not determined from the packet.`

► **Cache Mode "natural":**
  - `Data Records expire after active or inactive timeout, or on natural termination (e.g., TCP FIN, or TCP RST) of the Flow.`

► Further changes:
  - Note about configuration of Biflow metering
  - new parameter exportInterval used for Cache Mode "permanent" (instead of active timeout)
  - no Flow Key configuration in the case of Cache Mode "immediate"

Changes wrt/ Exporting Process configuration

▶ Configuration of **source IP address(es)** for all transport protocols

▶ New parameter **ifIndex/ifName** specifying the interface

▶ New parameter **maxPacketSize**:
- This parameter specifies the maximum size of packets sent to the Collector. If set to zero, the Exporting Device MUST derive the maximum packet size from path MTU discovery mechanisms. If not configured by the user, this parameter is set by the Monitoring Device.

▶ **timedReliability** can be used with per-SCTP-stream extension:
- Regardless of the value of this parameter, the ExportingProcess MAY use reliable SCTP transport for Data Sets associated with Options Templates.

▶ Clarifying note about modification of Data Records:
- The Exporting Process MAY modify the Packet Reports and Flow Records to enable a more efficient transmission or storage under the condition that no information is changed or suppressed. For example, the Exporting Process MAY shorten the length of a field according to the rules of reduced size encoding [RFC5101]. The Exporting Process MAY also export certain fields in a separate Data Record as described in [RFC5476].

Changes wrt/ "Adaptation to Device Capabilities"

▶ Clarifications regarding deviations and extensions, and how they must be specified using YANG

▶ Clarified device behavior in case of unsupported configuration:

- ```
  If a Monitoring Device is configured, it MUST notify
  the user about any part of the configuration which is
  not supported. The Monitoring Device MUST NOT silently
  accept configuration data which cannot be completely
  enforced.
  ```

Next Steps

▶ Still some comments to integrate

▶ Done already:
- a lot of transport protocol specific restrictions of destination parameters
  ➔ separate destination subclasses for SCTP, UDP, and TCP
- remove linecard/interface elements from Observation Point
- copy description of state parameters from IPFIX MIB
- new exportMode parameter ("parallel", "loadBalancing", or "fallback") replaces exportMemberType parameter
- Transport Session data appears as state parameters of export destination (Exporting Process) or receiver (Collecting Process)

▶ To be solved:
- consistent parameter description for Cache parameters maxFlows (formerly maxRecords), activeFlows, inactiveFlows
- decide whether configuration templates for Selectors should be used or not

➔ -06 version to be published as soon as all open issues are solved

▶ Reviewers will be invited to approve changes between -04 and -06

▶ Then ask NETMOD WG for another review of YANG specification