Reliability template Extension for IPFIX

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Reliability

- To ensure reliability *Metering* and *Exporting process* export “Reliability Statistics”

  - **Metering Process**
    - observationDomainId
    - ignoredPacketTotalCount
    - ignoredOctetTotalCount
    - time first ignored
    - time last ignored

  - **Exporting Process**
    - Exporting Process ID
    - notSentFlowTotalCount
    - notSentPacketTotalCount
    - notSentOctetTotalCount
    - time first flow dropped
    - time last flow dropped
Problem Statement

- IPFIX device under some temporary conditions may be unable to collect all the statistics, like when in:
  - Control Plane Restarts
  - Device overload

- Proposal: At least send the time duration for which the condition has persisted;

- **Metering Process**
  - observationDomainId
  - ignoredPacketTotalCount
  - ignoredOctetTotalCount
  - time first ignored
  - time last ignored

- **Exporting Process**
  - Exporting Process ID
  - notSentFlowTotalCount
  - notSentPacketTotalCount
  - notSentOctetTotalCount
  - time first flow dropped
  - time last flow dropped
• This condition of the device is indicated by a new element added in the template. “reliabilityReasonCode” – added to the Reliability statistics template.

  Value – 0x00 -> In this state the device is assumed to have the capacity to accumulate ALL counters. (Default value)

  0x01 -> This value is used when the device sends reliability statistics but has been unable to accumulate any or all counters.
discussion list mails

• Thread 1:
  Optional method: use existing IE systemInitTimeMilliseconds
  Send it when the system reboots (or is down), leave the collector app to take it as an indication of Device unable to collect stats.
  - Works with an existing IE, however: Not a clear cut solution, not flexible.

• Thread 2:
  Enhance the proposed IE to carry ‘hard-reboot’ condition
  - The systemInitTimeMilliseconds can be sent after hard-reboot to indicate this condition.

• Thread 3:
  Usage of start_time and end_time?
  - Subject to application type and usage
Next Steps

• Need for a solution;
  – Proposal for a new IE/Alternate protocol solution or
  – Text addition

• Need for more discussion?