IPFIX Mediation: Problem Statement

<draft-ietf-ipfix-mediators-problem-statement-00.txt>

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Background

- In IETF 69, the problem statement was approved as a WG work item.
  - IPFIX-WG began to discuss IPFIX Mediation in large-scale networks as a starting point.
- Submitted as IPFIX-WG item in May 2008.
  - Based on kobayashi-large-ps-02
- Milestone: April 2009, submit to IESG
Discussion in IETF 71

- After IPFIX-WG session, an editing session was held with some members. Thanks!
- We discussed mainly two points:
  - Expansion of the scope of the draft
    - Covers more general topics related to Mediation in any-scale networks.
    - Change title and add anonymization and interoperability for legacy protocol.
  - Clarification of the definitions of IPFIX Mediator and of example devices
    - The basic IPFIX Mediator model and effective examples.
Document outline in version 00

- Overall text improvement from large-ps-01

<table>
<thead>
<tr>
<th>Wording change</th>
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<tbody>
<tr>
<td>Wording change for clarity</td>
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<tr>
<td>++ New section</td>
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<td>+ New subsection and wording</td>
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Changes from large-ps-01 (1)

- Section 2 Terminology
  - Basic IPFIX Mediator model for clarification
  - Definition of example IPFIX Mediator devices added
    - IPFIX Proxy, Concentrator, Distributor, and Masquerading Proxy
Changes from large-ps-01 (2)

- Section 3 Examples of Applicability
  - Describes any applicable examples.

- New
- New
- New
- New

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Section 3.1. Inter-domain IPFIX Exporting

Applicable examples for anonymizing, filtering, and modifying Flow Records.
Changes from large-ps-01 (4)

- Section 3.2. Data retention
  - Data retention for Internet access service can be a storage system that uses Mediators and so on.

![Diagram of data collection system with mediators and collectors connected to exporters and the internet]
Changes from large-ps-01 (5)

- Section 3.3. Interoperability between Legacy Protocols and IPFIX
  - A convert function from legacy protocol to IPFIX is needed during the migration process.
Changes from large-ps-01 (6)

- Section 4 Approaches to Scalability
  - Two useful functions have been added.
Changes from large-ps-01 (7)

- Change the name to “Flow-based Collector selection” from “load-balancing” functions
- Selecting a specific Collector based on the content of a Flow Record is different from load-balancing.

![Diagram]

Collector
IPv4
Mediator
IPv6
Exporter
Changes from large-ps-01 (8)

- Section 4.5. Flow Selection Sampling
  - Selecting and then aggregating small Flows, which consist of a small number of packets, can reduce the load of Collectors.
  - Refer to “I-D. peluso-flowselection”.

```
IPFIX Mediator

Packets=1

Packets=1

Packets=1

Packets=300

Packets=400

Packets=200

IPFIX Collector

Packets=xx

Packets=300

Packets=400

Packets=200

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Changes from large-ps-01 (9)

- Section 4.6. Information Elements and Flow Key Selection
  - By utilizing the flexibility of the Metering Process and Exporting Process, IPFIX Collector can obtain the Flow Records of interest to the Operator.
  - Implementations are:
    - Setting Flow Keys in Metering Process.
    - Filtering Flow Records in Exporting Process.
Next step

☐ Submission of final draft to IESG by November, after Dublin IETF.