IPFIX Mediation: Framework

draft-ietf-ipfix-mediators-framework-03

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Status

❖ Posted version -03

    ❑ Changes from -02 to -03

        • Feedback from problem statement WG Last Call.

        • Feedback from received comments among co-authors.

❖ There is still one open issue.

Feedback from PS WG Last Call

❖ Terminologies section

❖ All descriptions are aligned with Intermediate Process.

❖ Described different specific Intermediate Processes.

   ❑ Intermediate Selection Process
   ❑ Intermediate Correlation Process
   ❑ Intermediate Aggregation Process
   ❑ Intermediate Anonymization Process

Feedback from received comments

❖Which intermediate process types are hosted in specific IPFIX Mediator type?

➔Added the following table.

```
+--------------+------------+-------------+---------------------+
| Mediator Type  Number of    IP Type      Number of IPFIX      |
|                hosted IPs                 Transport Sessions   |
+==============+============+=============+=====================+
| Proxy          zero                       incoming: zero(*) or one |
|                                           outgoing: one or more    |
+--------------+------------+-------------+---------------------+
| Distributor    one or more  Selection     incoming: one or more |
|                                           outgoing: one or more |
+--------------+------------+-------------+---------------------+
| Concentrator   zero or more Aggregation   incoming: one or more |
|                             Correlation   outgoing: one          |
+--------------+------------+-------------+---------------------+
| Masquerading   one or more  Anonymization incoming: one or more |
| Proxy                                      outgoing: one          |
+--------------+------------+-------------+---------------------+
(*) When an IPFIX Proxy converts IPFIX from other protocols.
```
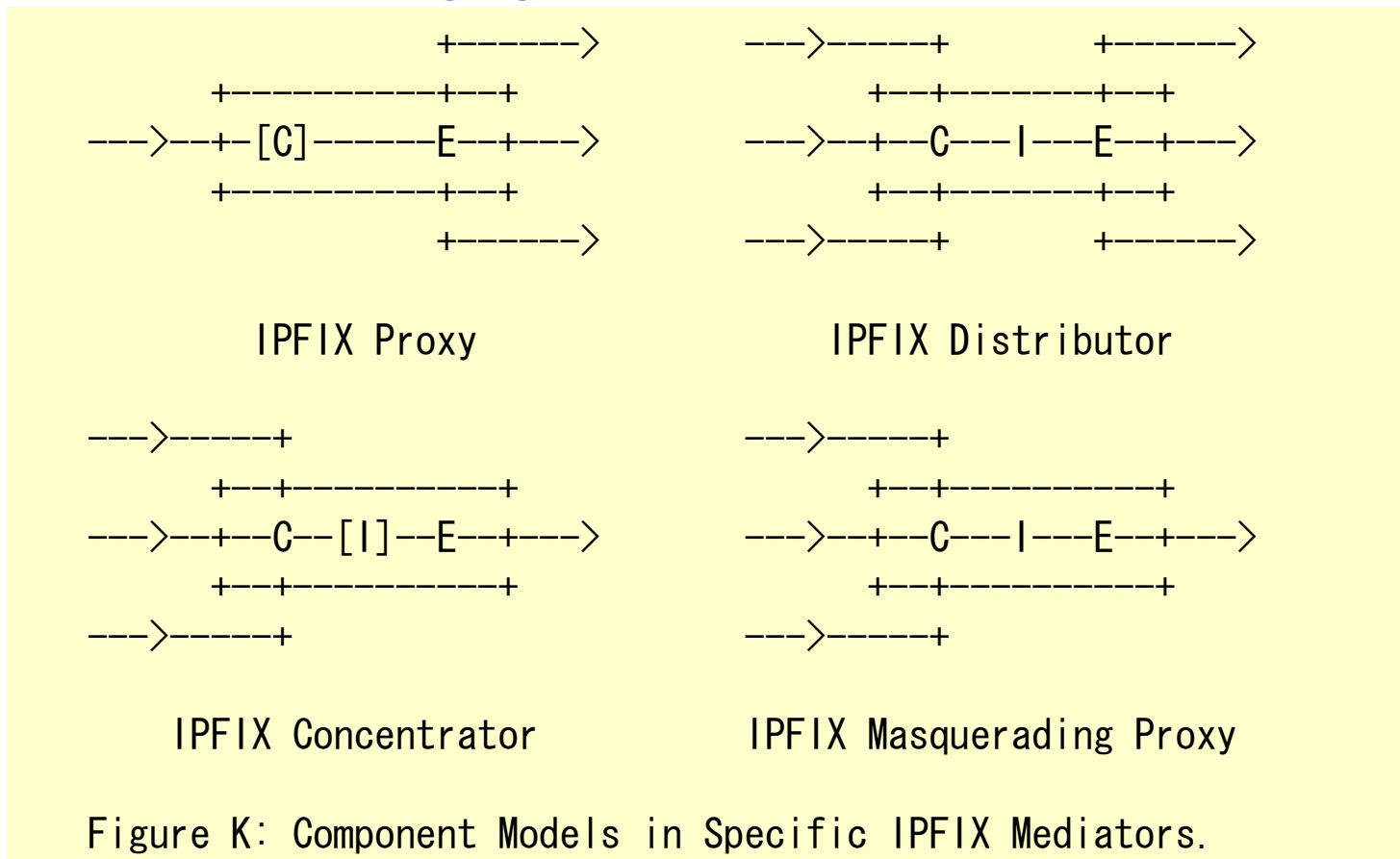
➔Regarding an IPFIX Proxy and Concentrator, the table need to be rewritten based on problem statement slide.

Feedback from received comments

❖ Clarify the number of incoming/outgoing sessions in each IPFIX Mediator type.

➔ Added the following figure.

```
                      +------->           --->-----+        +------->
         +----------+-+                    +--+------+-+
---->--+-[C]------E--+--->       ---->--+--C---I---E--+--->
         +----------+-+                    +--+------+-+
               +------->           --->-----+        +------->

          IPFIX Proxy                    IPFIX Distributor


--->-----+                        --->-----+
   +--+---------+                    +--+---------+
---->--+--C--[I]--E--+--->        ---->--+--C---I---E--+--->
   +--+---------+                    +--+---------+
--->-----+                        --->-----+


       IPFIX Concentrator             IPFIX Masquerading Proxy

   Figure K: Component Models in Specific IPFIX Mediators.
```

Feedback from received comments

❖ **What consideration points are when encoding IPFIX Header?**

➔ Added the following description in section 7.

❑ Export time
  - Case 1: keeping the field value of incoming Transport Sessions
  - Case 2: setting the time at which an IPFIX Message leaves the IPFIX Mediator
  - In case 2, the IPFIX Mediator needs to handle any delta time stamp fields

❑ Sequence Number
  - IPFIX Proxy needs to handle the Sequence Number value when the incoming Transport Session shuts down and starts.

❑ Observation Domain ID
  - When relaying an IPFIX Message after replacing each incoming ODID with a new value, and using incoming ODIDs as the scope fields, it needs to set the appropriate scope fields in Data Records defined in Options Template Records.

Resolved issue in -03

❖How to inform observation information, when aggregating Data Records.

  ☐ RFC5101 mentions that ODID should be 0 when aggregation.

➔Added the following description in section 7.

  ☐ In that case, an IPFIX Concentrator can add new field to Flow Record. The new Information Element indicates observation information instead of ODID.

Open issue

❖ In case of NetFlow to IPFIX, what function is needed?

  ◻ Gerhard proposed that an "Intermediate Conversion Process" converts information element ID and option template structure.

  ➔ Maybe yes. But, not yet described it.

  ➔ However, particular assumption (NetFlow) on how traffic records are transferred to IPFIX Mediator is allowed?

  ➔ The description needs to be generalized, NetFlow is as one of examples. Is it right?

IPFIX Mediator

Intermediate Conversion Process   →   Exporting Process

NetFlow   IPFIX
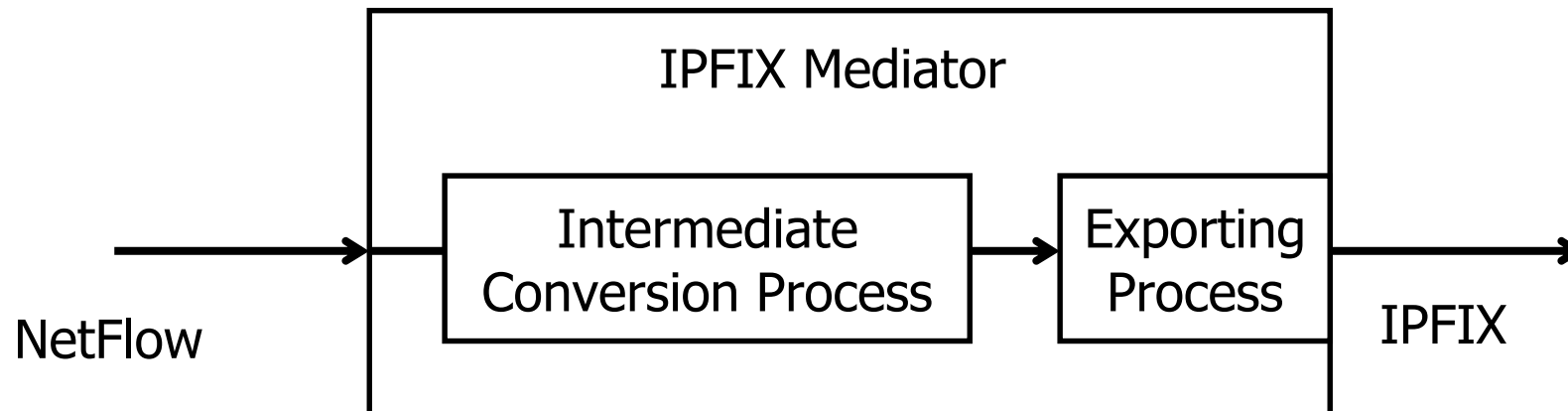
Next Step

❖Need to rewrite it based on feedback from problem statement, today discussion and resolve open issue.

❖After them, it is ready for WG last call.