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# Configuration Data Model for IPFIX and PSAMP

draft-ietf-ipfix-configuration-model-02

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# Changes in -02: Text

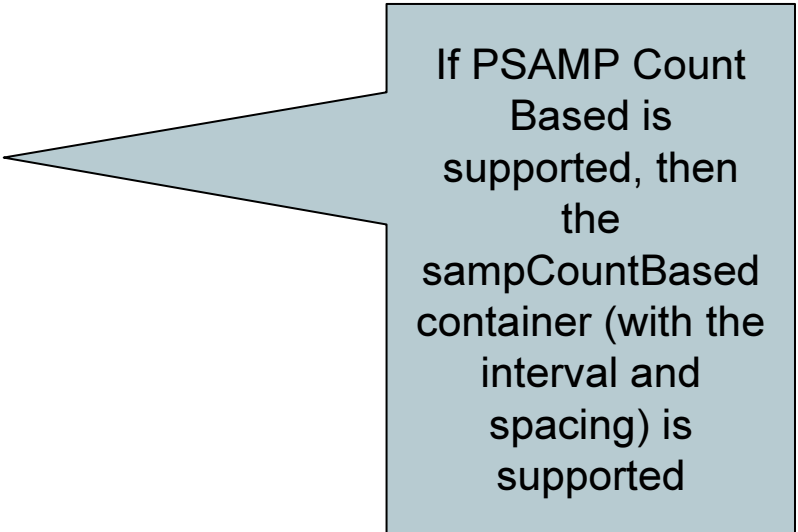
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- ▶ Terminology section extended:
  - list of terms adopted from other RFCs
  - definitions of **Metering Process** and **Exporting Process** that satisfies IPFIX and PSAMP
  - new term **Monitoring Device** encompassing Exporters and Collectors
  
- ▶ Structure of the configuration data model clarified (Section 4):
  - relationship between Metering Process, Selection Process, Cache
  - usage of UML class diagrams
  
- ▶ New section 6: Adaptation to device capabilities
  - utilization of YANG's **feature** concept in the model
  - note about YANG's **deviation** concept
  
- ▶ New example 8.5:
  - restricting configuration to device capabilities with YANG deviations

# Changes in -02: Feature Example

```
feature psampSampCountBased {  
    description "If supported, the device supports count-based Sampling.  
    The Selector method sampCountBased can be configured."  
}
```

```
choice Method {  
    mandatory true;  
    description "See PSAMP-MIB for details about the selection  
    methods and their parameters."  
    reference "draft-ietf-psamp-mib-06."  
    leaf selectAll { type empty; }  
    container sampCountBased {  
        if-feature psampSampCountBased;  
        leaf interval {  
            type uint32;  
            mandatory true;  
        }  
        leaf spacing {  
            type uint32;  
            mandatory true;  
        }  
    }  
}
```



If PSAMP Count Based is supported, then the sampCountBased container (with the interval and spacing) is supported

## Changes in -02: Configuration Data Model (cont.)

- ▶ YANG features control parameter availability:

Feature	If supported:
<code>exporter</code>	Exporting Process can be configured
<code>collector</code>	Collecting Process can be configured
<code>meter</code>	Observation Point, Selection Process, Cache can be configured
<code>psampSampCountBased,</code> <code>...</code>	specific Sampling or Filtering method can be configured
<code>udpTransport,</code> <code>tcpTransport</code>	UDP/TCP can be configured as transport protocol
<code>fileReader,</code> <code>fileWriter</code>	File Reader/File Writer can be configured

→ adaption of configuration model to parameter set of Exporter, Collector,...

# Changes in -02: Feature Example

```
module my-ipfix-psamp-deviation {
  namespace "urn:my-company:xml:ns:ipfix-psamp-config";
  prefix my;

  import ipfix-psamp { prefix ipfix; }

  deviation /ipfix:ipfix/ipfix:observationPoint/ipfix:linecard {
    deviate not-supported;
  }
  deviation /ipfix:ipfix/ipfix:observationPoint {
    deviate add {
      must "ipfix:observationDomainId=1";
    }
    deviate add {
      must "ipfix:interface/ipfix:ifIndex=1
        or ipfix:interface/ipfix:ifIndex=2";
    }
  }
  deviation
    /ipfix:ipfix/ipfix:observationPoint/ipfix:observationPointId {
    deviate add {
      must "current()=../ipfix:interface/ipfix:ifIndex";
    }
  }
}
```

No line card

OD id must be  
equal to 1

OP = 1 or 2

OP = ifIndex

# Changes in -02: Configuration Data Model

- ▶ Selection Process simplified:
  - Selectors are now specified as part of one specific Selection Process
  
- ▶ State (read-only) parameters adopted from IPFIX-MIB:

Functional block	State parameters
Selector	packetsObserved, packetsDropped
Cache	activeFlows, inactiveFlows, dataRecords
Collecting Process, Exporting Process	<p><b>Per incoming/outgoing Transport Sessions:</b>                      protocol, src dstAddress, src dstPort,                      sctpAssocId, [option]templateRefreshTimeout,                      [option]templateRefreshPacket, status, rate,                      packets, bytes, messages, discardedMessages,                      records, templates, optionTemplates</p> <p><b>Per received/sent Templates:</b>                      observationDomainId, templateId, setId,                      accessTime, dataRecords, <b>and fields</b></p>

# Open issues & Next Steps

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- ▶ Open Issues
  - [PSAMP-MIB] reference: need to be replaced if PSAMP-MIB draft is discontinued
  - TLS/DTLS discussion with Brian
  
- ▶ Next step: provide a new version
  - Remove the Exporting Process and Collecting Process IDs, to be consistent with the MIB
  - Include YANG review from Andy Bierman
  - Some editorial improvements
  - Potentially a new example about the Selection Sequence Id
  
- ▶ Next step: “Are we going to wait for YANG on this?”
  - IPFIX charter says: “Mar 2009 Submit to IESG”
  - Proposal: Yes, IF YANG is on time
  - Otherwise, model part of the draft is ready for WGLC
    - ▶ Feedback is welcome