
Configuration Data Model for IPFIX and PSAMP

draft-muenz-ipfix-configuration-04

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Changes in the Model

- ▶ Configuration of IPFIX file export and import:
 - located in parameter section of Exporting and Collecting Process

- ▶ SCTP parameters:
 - timed reliability
 - eligible local IP addresses for SCTP endpoint

- ▶ CacheParameters renamed Cache
 - We monitor a cache, not only the parameters

Changes in the Model

- Clarification:
 - in the model: Selection Process == Primitive Selector

```
+-----+
| SelectionProcess |
+-----+
| [name]          |<>-----+ 1 +-----+
| selectorId      |      | SampCountBased/ |
|                 |      | SampTimeBased/  |
|                 |      | SampRandOutOfN/  |
|                 |      | SampUniProb/      |
|                 |      | SampNonUniProb/   |
|                 |      | SampFlowState/    |
|                 |      | FilterMatch/      |
|                 |      | FilterHash/       |
|                 |      | FilterRState      |
+-----+                +-----+
```

Figure 5: SelectionProcess class

Switch from XML Schema to YANG

▶ What is YANG?

YANG is a data modeling language used to model configuration and state data manipulated by the NETCONF protocol, NETCONF remote procedure calls, and NETCONF notifications.

▶ Individual draft by Martin Bjorklund

- <http://tools.ietf.org/id/draft-bjorklund-netconf-yang-02.txt>

▶ Homepage with tutorials, tools, and examples:

<http://www.yang-central.org>

▶ Mailing list: yang@ietf.org

▶ Discussion at CANMOD BOF on Wednesday

Switch from XML Schema to YANG

- ▶ History:
 - IETF Vancouver: YANG-gang contacted us after IPFIX session
 - January 08: Martin sends us a YANG spec covering large parts of our model as a starting point.
- ▶ Since then: close cooperation with YANG-gang:
 - Martin Bjorklund reviewed the model
 - additional feedback has been requested
- ▶ Gerhard's experience:
 - YANG much easier to read than XSD for human beings
 - only basic knowledge about a few YANG keywords required to understand the general structure of a data model
 - adapted to Netconf, enforces compliance with Netconf
 - foresees vendor-specific extensions
 - pyang tool enables validation and conversion to XML Schema

Next Steps?

- ▶ Adoption as an IPFIX WG document?
- ▶ Open Issues:
 - SCTP parameters
 - Continue discussion and work on the model
 - 擱 Configuration of multiple templates per cache?
 - 擱 adaptation to final PSAMP documents (particularly PSAMP-MIB)
 - 擱 Consider reporting of device capabilities?
- ▶ Follow the consensus of the CANMOD BOF
- ▶ Plans for reference implementation at the Universities of Tübingen and Erlangen (<http://www.history-project.net/>):
 - VERMONT + Netconf agent based on Ensuite Framework