

Export of Structured Data in IPFIX

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< draft-ietf-ipfix-structured-data-03.txt >

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A little bit of history

- **July 10th version 2 posted**
- **July 28th IPFIX meeting Maastricht**
- **October 10th version 3 posted**
- **October 28th WG LC started**
- **November 3rd WG LC finished**

I thought it was WGLC.
Received some good
feedback from Gerhard
Muenz, Christophe
Sommer, Carsten
Schmoll, Rahul Patel,
Brian Trammell

New In Version 3

- **"Added clarity regarding semantic of subTemplateMultiList"**

The semantic in the Structured Data Information Elements is provided in order to express the relationship among the multiple top-level list elements. As an example, if a list is composed of the elements (A,B,C), the semantic expresses the relationship among A, B, and C, regardless of whether A, B, and C, are individual elements or list of elements.

(Discussion at the last IETF meeting, raised by Gerhard and Brian)

New In Version 3

- **Added: “Deleting a Template implies that it MUST NOT be used within subTemplateList and subTemplateMultiList any more”**
- **Added the exporterIPv4Address in Observation Point example corrected.**

Observation Point as a subTemplateMultiList of:

Template Record 1: exporterIPv4Address

Template Record 2: exporterIPv4Address, basicList of ingressInterface

Template Record 3: exporterIPv4Address, lineCardId

New In Version 3

- **Carsten Schmoll**
 - Editorial comments, provided clarity for some items
 - Clarification on the 64k limit
- **Gerhard Muenz**
 - Spent many hours reviewing all aspects of the drafts
- **Rahul Patel**
 - Request for improved examples
- **Christoph Sommer**
 - Specification clarification requested

Real WGLC Feedback

- **Rahul Patel: fine**
- **Gerhard Muenz (editorial)**

OLD:

The Exporter SHOULD NOT check all semantically meaningless combinations before exporting the Data Record.

NEW:

The Exporting Process doesn't have to check all semantically meaningless combinations before exporting the Data Record.

Otherwise, fine

Real WGLC Feedback

Brian Trammell – Issue 2

- **Missing a discussion of when you shouldn't use Structured Data at all:**

i.e., when there is low or no semantic variation among records represented by a template. Consequently, I'm not sure about section 9.3. It seems like although we could use structured data for biflows, the suggested approach misses the 1. semantic clarity and 2. export efficiency that were aims of RFC 5103.
- **Answer**

semantic has no significance, then we shouldn't be using structured data. -> We can think about this some more and possibly add a sentence to the draft.

Semantic = allOf

Yes, there is an overhead due to template-id, semantic etc, but we wanted to highlight we can encode this information without the private Reverse PEN as stated in RFC 5103

Real WGLC Feedback

Hadriel Kaplan

- **The structured-data draft defines three new abstract data types: basicList, subTemplateList, and subTemplateMultiList. Are these allowed/expected to be used by a new IANA-assigned IE as its abstract data type?**

For example, specifying new IEs for bgpPathList, bgpSequenceList and bgpSetList, of abstract types and semantics basicList/ordered, basicList/ordered, and basicList/exactlyOneOf respectively.

- **Answer**

The new data types may be used by new IANA or Enterprise specific information elements as required.

However, we will have to decide how far we want to go in defining new IEs based on subTemplateList and subTemplateMultiList...

Explosion of IE? Where do stop?

Maybe we don't want to stress this capability

Summary

- **WG LC ended**
- **Next steps**

Post a new version with reviewers comments addressed

After that, ready for IETF Last Call