

IPFIX Implementation Guidelines

<draft-boschi-ipfix-implementation-guidelines-00.txt>

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Outline

- Terminology
- Implementation Guidelines
- Guidelines for implementation on Middleboxes
- Implementation mistakes
- Open issues
- Code availability

Implementation Guidelines

- IPFIX Message Format
- Padding
- IPFIX Message Header Export Time and Data Record Time
- Template Management
- The Collecting Process's side
- Transport Protocol
- Extensions
 - How to add new IEs

Multiple IEs of the same type

- Currently: „Exporters should avoid multiple non-scope IEs of the same type“
- Collectors should log a warning and MAY accept the Ies using a first match semantic
- Multiple IEs of the same type are needed, should be allowed
 - E.g. PSAMP, the Selector ID
 - E.g. actual src IP address, NAT src IP address
 - E.g. AS numbers

Transport Protocol

- UDP
 - Guidelines on the minimum range of resend time
- SCTP
 - Current OSs with SCTP support over IPv4 and IPv6

Guidelines for implementation on middleboxes

- Traffic Flow Scenarios at Middleboxes
- Location of the Observation Point
- Reporting Flow-related Middlebox Internals
- Middleboxes may delay, re-order, drop or multiply packets
- Change packet header fields or payload

Common implementation mistakes

- IPFIX and Netflowv9
 - List of most important differences
 - Transport protocol,
 - IETF and not-IETF defined IEs,
 - IPFIX doesn't allow scope of length zero,
 - ...
- Other common mistakes
 - Padding...

Open Issues

- When receiving information elements from vendors the following information is directly available to the collector:
 - the vendor specific IE identifier
 - its length
 - the enterprise ID.
- While enterprise IDs are publicly available and is therefore straightforward to identify the enterprise, how to obtain the type of the given information element requires some clarification.

Conclusions

- 2nd interoperability event planned
- Comments welcome...