

IPFIX Implementation Guidelines

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Outline

- Motivation
- Document overview
- Changes from version -00
- Open issues
- Conclusions and future work

Motivation

- Many ongoing IPFIX implementations
- Several recommendations have been identified
 - E.g. at the IPFIX interoperability events
- This document will help improving ongoing implementations...
- ...and discusses open issues and unclear definitions

Document outline

- 1 Introduction
- 2 Terminology
- 3 General Guidelines
 - 3.1 Sets
 - 3.2 Template and Data Records
 - 3.3 Information Elements
 - 3.4 IPFIX Message Header Export Time and Data Record Time
 - 3.5 The Collecting Process's side
 - 3.6 Transport Protocol
 - 3.7 Extensions
- 4 Guidelines for implementation on Middleboxes
 - 4.1 Traffic Flow Scenarios at Middleboxes
 - 4.2 Location of the Observation Point
 - 4.3 Reporting Flow-related Middlebox Internals
- 5 Implementation mistakes
- 6 Open issues
- 7 Security Considerations
- 8 Code availability

Changes from version -00

- Many sections improved
 - E.g. multiple IEs of the same type
- “Using counters” section added
- Transport protocol section
 - Improved SCTP
 - Guideline on the retransmission interval (UDP)
- Middleboxes section improved
 - Middleboxes changing IP Addresses and port numbers
- Common implementation mistakes:
 - IEs spelling

(new) Open Issues

- Send UDP resend time with Option Records
 - templateReportingInterval IE
- If an OP is co-located with one or more tunnel endpoints, the exporter SHOULD be able to report the tunnelID
 - TunnelID IE
- Enterprise IDs
 - Assign IDs in range 10000-11000 to implementers?
- Managed identifiers

Conclusions and future work

- To be included in -02
 - “applicability” property of IPFIX IEs
 - Padding
 - ...
- IPFIX WG Item?