

IPFIX Protocol Specifications

IPFIX IETF-61 November 11th, 2004

<draft-ietf-ipfix-protocol-06.txt>

Benoit Claise <bclaise@cisco.com>

Stewart Bryant <stbryant@cisco.com>

Mark Fullmer <maf@eng.oar.net>

Ganesh Sadasivan <gsadasiv@cisco.com>

Closed Issues in version 05

- **PROTO-1: FlowSet replaced by Set**
- **PROTO-2: use Information Elements and Field Type (when it refers to the packet field). Remove the notion of data types**
- **PROTO-[16-19]: Scope issues**

Modified the Option Template so that the scope contains a normal Information Element, modified the Option Data Records, and add the section 7.5.1 on the scope relationship. Changed the example according to the new scope
- **PROTO-27: Correct the examples: no more Set 0 and 1**

Closed Issues in version 05

- Terminology issue:
 - Introduced the “Exporter”, remove the “IPFIX Node”
 - “Flow Type” and “Control Information, Data Stream” definitions removed from this draft
- Private Addresses used in the examples, according to RFC3330
- Improved the Padding definitions (David Moore)
 - “The padding length MUST be shorter than any allowable Flow Data Record in this Data Set.”
 - Similar sentence for all 4 instances of padding: Template Set, Options Template Set, Data Set (options data record and flow data record)

Closed Issues in version 05

- **Add some new text about the measurement parameters change (David Moore)**
 - **“If the measurement parameters change, a new Template ID SHOULD be initiated and used. Examples of the measurement changes are: a new sampling rate, a new flow expiration process, a new filtering definition, etc...”**
- **Removed the MUST, SHOULD, MAY concerning the metering process flow expiration**
- **Editorial changes: spelling, IPR section, capitalized definitions, etc...**

Closed Issues in version 06

- **PROTO-21: metering process statistics option template. New text introduced**
 - Section 8.1 The Metering Process Statistics Option Template**
 - Section 8.2 The Metering Process Reliability Statistics Option Template**
 - Section 8.3 The Exporting Process Reliability Statistics Option Template**
- **PROTO-26: IANA considerations inserted**
- **PROTO-24: "Linkage with the information model" must be completed with base types used in [IPFIX-INFO]**
 - "Information elements MUST be sent in canonical format in network byte order." (Stewart Bryant)**
- **PROTO-35: make sure the definitions match between [IPFIX-ARCH] and [IPFIX-PROTO]**

Closed Issues in version 06

- **The protocol did not allow for a variable length element with 255 bytes length (Jan Petranek)**
- **“The Export Packet 16-bit LENGTH field limits the length of a IPFIX Message to 65536 octets including the header. A Collecting Process **MUST** be able to handle IPFIX Message lengths of up to 65536 octets.” (Simon Leinen)**
- **Editorial changes**

Open Issues in version 06

Proto-4: TCP

- TCP section adapted from Simon Leinen's draft: restructured to match the other transport mapping sections, use the correct capitalized terminology
 - Simon posted some comments on the mailing list:
 - Simon doesn't like the structure of the transport mapping sections.
 - Simon posted draft-leinen-ipfix-tcp-01.txt
- Question 1: same sections for all transport mapping?
- Question 2: should we change the section for all transport mappings?

5.2 TCP

5.2.1 Congestion Avoidance

5.2.2 Reliability

5.2.3 MTU

5.2.4 Exporting Process

5.2.4.1 Connection Establishment

5.2.4.2 Connection Release

5.2.4.3 IPFIX Message Encoding

5.2.4.4 Templates

5.2.5 Fail-over

Open Issues in version 06

STCP

- **PROTO-31: The "Sequence Number" and "Source ID" treatment in case of multiple streams in SCTP is not well described.**
- **PROTO-32: Two SCTP contradictory sentences**
- **PROTO-33: non matching Source ID: silently discard? reset the connection? log an error? should the exporting process be allowed to sent multiple Source ID per stream?**

Open Issues in version 06

- **PROTO-23:** Finalize the time details. The time-related Information Elements are not defined in [IPFIX-INFO]

<http://ipfix.doit.wisc.edu/archive/2580.html>

We will propose some text

- **PROTO-25:** The section 11 "Template Management" will have to updated according to the transport protocol.

Agreement from last IETF: treat UDP as the exception in the UDP transport protocol subsection

- **PROTO-44:** IANA assigned port (UDP, TCP, SCTP) for IPFIX?

Simon proposed we don't need to do that!

Open Issues in version 06

- **PROTO-36: Insert an Enterprise Specific Information Element example. For scope and non scope**
- **PROTO-38: [IPFIX-INFO] consistency**
- **PROTO-39 : what is happening when we reach the maximum number of Template ID? Wrap around?**

Open Issues in version 06

- **PROTO-34: Need a security expert to review the security section**
- **PROTO-30: Review the IPFIX requirements RFC 3917**
- **Those 2 issues could be part of the last-call**

Proposal...

- The IPFIX charter is targeted to export flow records related information
IPFIX protocol fulfils the needs, based on RFC3917
- However, with (Option) Templates, we can export any information elements: Flow related info, PSAMP packet reports, MIB variable, IP SLA info, etc...
- The IP **Flexible** Information eXport (IPFIX) protocol???

Feedback

- Any other issues to be discussed now?
- Will publish a new version of the draft before the end of the month, trying to address all the remaining open issue
- Please contribute and/or review
- Thank you