

Information Elements for Data Link Layer Traffic Measurement

draft-kashima-ipfix-data-link-layer-monitoring-07

Shingo Kashima, Kensuke Nakata, Atsushi Kobayashi,
Paul Aitken

83rd IETF Meeting, Paris, 2012

Introduction

- The IPFIX Information Model [RFC5102] defines an extensible list of Information Elements which may be transmitted by the IPFIX protocol [RFC5101].
- This document lists a series of new Information Elements for data link layer monitoring.

History

- -00 October 2009
- -05 Added dot1q Elements
- -06 New section, “VXLAN Summary”
- -07 14 new layer 2 IEs equivalent to existing layer 3 IEs.
New section “The relationship between
Ethernet header fields and Information Elements”.

The draft has been slowly evolving over the last 2½ years.

Elements already allocated by IANA

ID	Name
312	dataLinkFrameSize
315	dataLinkFrameSection
347	dataLinkFrameType
348	sectionOffset
349	sectionObservedOctets
350	dot1qServiceInstanceTag
351	dot1qServiceInstanceId
352	dot1qServiceInstancePriority
353	dot1qCustomerDestinationMacAddress
354	dot1qCustomerSourceMacAddress

New Elements yet to be allocated by IANA

L2 ID	L2 Name
TBD01	I2octetDeltaCount
TBD02	postMCastL2OctetDeltaCount
TBD03	postL2OctetDeltaCount
TBD04	minimumL2TotalLength
TBD05	maximumL2TotalLength
TBD06	I2octetTotalCount
TBD07	droppedL2OctetDeltaCount
TBD08	droppedL2OctetTotalCount
TBD09	ignoredL2OctetTotalCount
TBD10	notSentL2OctetTotalCount
TBD11	postL2OctetTotalCount
TBD12	postMCastL2OctetTotalCount
TBD13	I2octetDeltaSumOfSquares
TBD14	I2octetTotalSumOfSquares

Open Issue

- New Information Elements related to packet section (ie, **sectionOffset** and **sectionObservedOctets**) can be applied not only to dataLinkFrameSection but also all kinds of packet section:
- ipHeaderPacketSection, ipPayloadPacketSection, mplsLabelStackSection, mplsPayloadPacketSection.
- In this case, existing Information Elements Description should be modified.

Proposal

Ask for the IPFIX WG to adopt the draft under section 7 of the current charter:

7. Operational experiences showed that it would be useful to define several new information elements for data link monitoring covering frame size, type, sections of frames, and VLAN information. The IPFIX WG will create a document defining these new information elements.

Information Elements for Data Link Layer Traffic Measurement

~~draft-kashima-ipfix-data-link-layer-monitoring-07~~

draft-ietf-ipfix-data-link-layer-monitoring-00

Shingo Kashima, Paul Aitken

83rd IETF Meeting, Paris, 2012