Common Interface Extension YANG Data Models

draft-ietf-netmod-intf-ext-yang-07

NETMOD WG

July 22, 2019

Rob Wilton

WGLC

- Not many reviews, having a few more would be useful, even if it just that you have read the document

- One issue raised by Acee

- One issue on a separate thread raised concerning MTU

Acee's issue:

"Perhaps ietf-interface-ethernet-like module ethlike:ethernet-like/ethlike:statistics could include a subset of the counters from RFC 3635. I say a subset since some of these counters are a bit archaic given the state of the technology and judgement should be applied on which to include."

- The relevant subset of these [frame] counters should already be in IEEE 802.3.2.

- But could add a sub-interface demux drop counter?

- Also no coverage for Ethernet histogram statistics …

Ethernet Histogram Statistics

```
Input pkts 65-127 bytes     = 0
Input pkts 128-255 bytes    = 0
Input pkts 256-511 bytes    = 0
Input pkts 512-1023 bytes   = 0
Input pkts 1024-1518 bytes  = 0
Input pkts 1519-Max bytes   = 0

Output pkts 65-127 bytes    = 0
Output pkts 128-255 bytes   = 0
Output pkts 256-511 bytes   = 0
Output pkts 512-1023 bytes  = 0
Output pkts 1024-1518 bytes = 0
Output pkts 1519-Max bytes  = 0
```

Ethernet Histogram Statistics (2)

AIUI, the IEEE 802.3 YANG WG has issues with including counters like these:

(1) They didn't really want to define histogram counter values for MTUs that are above the officially sanctioned MTU of 1514/1518 in the Ethernet specification, even though a lot of hardware supports up to 9K+.

(2) The bucket ranges, at least once you get past the "512-1023" bucket, seem to somewhat vary by ASIC vendor.

(3) IEEE 802.3 has a well defined internal management API (802.3 clause 30), and these histogram counters are not currently defined as part of that internal management API. Extending the internal 802.3 management API seems tricky due to point (1) and (2) above.

Ethernet Histogram Statistics (3)

- The suggestion in the 802.3 discussions is that these counters could be defined in an IETF YANG module (skirting the IEEE concerns about maximum MTUs)

- Proposal to allow the operational data to return a list of bucket entries, where each entry defines the inclusive range of the bucket, and a count of the pkts that matched the bucket range (in either the ingress or egress direction).

- This list would sit alongside a RECOMMENDATION of what bucket sizes to use:
  - basically doubling each time up to the MTU, with some consideration around the 1514/1518/1522 boundary,
  - but allowing freedom for a device to accurately return the histogram ranges actually supported by the hardware.

Ethernet Histogram Statistics (4)

- Do I add these in now, or can these be deferred?

MTU issue
Netmod thread: Question regarding RFC 8344

- Linux loopback MTU is 65536

- Too big for IP MTU max 65535

- Intf-ext YANG model defines L2 MTU as uint16

- I Propose changing this to uint32 instead.

Sub-interface VLAN YANG Data Models
draft-ietf-netmod-sub-intf-vlan-model-05

NETMOD WG

July 22, 2019

Rob Wilton

I E T F

Sub-interface VLAN YANG Data Models
In WGLC

- 2 reviewers support publication

- No comments received …

- … possibly this is because the document is flawless ^^ …

- … otherwise please review it if you have time