From: Al Morton [acmorton@att.com]
Sent: Thursday, April 29, 2010 9:23 AM
To: tony@jeffree.co.uk; Pat Thaler
Cc: Eric Gray; Ron Bonica; Dan Romascanu; ietf-secretariat@ietf.org
Subject: Liaison to IEEE 802.1 on DCB proposal

To: IEEE 802.1
Tony Jeffrey, WG Chair
and Pat Thaler, DCB TG Chair

From: IETF Benchmarking Methodology Working Group (BMWG)
CC: Ron Bonica, OPS Area Director, BMWG Advisor
Dan Romascanu, OPS Area Director
Eric Gray, IETF Liaison Manager for IEEE 802.1
IETF Secretariat

Response Contacts: Al Morton, BMWG Chair
and <statements@ietf.org>
Technical Contact: <bmwg@ietf.org>

Title: Proposal to update RFCs 2544 and 2889 to address the
Per-Flow Control capabilities of IEEE 802.1Qbb

Purpose: For Action/Comment
The purpose of this Liaison is to inform you of a new work proposal in the Benchmarking Methodology Working Group (BMWG) of the IETF, and seek your comments.

Deadline: August 1, 2010

BMWG is considering adding a charter work item to update several of our foundation RFCs, described in detail in the memo by D.Newman and T.Player:
http://tools.ietf.org/html/draft-player-dcb-benchmarking-01
In this proposal, there is an intersection between IETF benchmarking practice and new IEEE standardization work.

Benchmarks for Ethernet switch performance based on RFCs 1242, 2285, 2544 and 2889 (these represent BMWG's foundation RFCs that are referenced
frequently in our work) are recognized as industry standards. The terminology and methodology described in these memos have been in widespread use by test equipment vendors, networking device manufacturers,
enterprises and service providers for more than a decade.

Some key concepts from our past work are not meaningful when testing switches that implement new IEEE specifications in the area of data center
bridging. For example, throughput as defined in RFC 1242 cannot be measured when testing devices that implement three new IEEE specifications: priority-based flow control (802.1Qbb); priority groups (802.1Qaz); and congestion notification (802.1Qau).

Since devices that implement these new congestion-management specifications should never drop frames, and since the metric of

throughput distinguishes between non-zero and zero drop rates, no throughput measurement is possible using the existing methodology. There are related cases where other existing metrics can be extended or replaced. See the list of affected RFCs attached below.

The Internet-Draft seeks to recognize the importance of these new IEEE specifications in the context of data center switch benchmarking. The draft seeks to extend rather than replace existing industry standard practices for benchmarking switch performance characteristics in the lab, and it does so by defining new terms and metrics relevant to recent IEEE work on data center bridging.

The charter of BMWG strictly limits our work to laboratory characterization.
Therefore, live network performance testing, manageability, MIB module development, and other operational/functional testing are beyond our scope.
http://www.ietf.org/dyn/wg/charter/bmwg-charter

Before considering this work proposal further, we seek your comments on:
- whether there is overlapping work planned in 802.1
- whether a liaison relationship (between the BMWG and IEEE 802.1 WG) could be beneficial to complete this work
- the proposal details, as currently described

sincerely,
Al Morton
bmwg chair

RFC1242-style throughput is a significant metric in at least these RFCs, and possibly others:

1242
2285
2432
2544
2889
3511
3918

And the tests described in the new DCB proposal Internet-Draft use concepts discussed in:

1242
2285
2544
2889
4689
