

Congestion management interim

CM and 802.1 specifications

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Objectives for this meeting

Understand/bound changes/additions to .1 specs

- Interoperability and coexistence
- Architectural (and potentially cost) impact

Agreement and documentation required

- Contract between new and prior projects
- Blank cheques don't get signed

You wanna do what ??!!

Without evil intent it is still easy to create

- Plug-and-perish
 - Where did my network go?
- Costly options
 - Standards options are vendor requirements
- Architectural impacts and future constraints
 - Of course everyone implements *this* way!
 - I didn't think of *that*!

You wanna do what ??!!

The burden of proof is on the proposed project

- Users of existing standards do not have to prove that you will impact them, they can just vote *NO!*
- If you are focused on your problem, not theirs, there is no reason they should trust you
- If you can't decide on suitable project bounds you don't know enough to write a document, if you are not writing a document you don't need a PAR

Upfront project bounds avoid pitfalls, speed development, and build confidence.

Coexistence and interoperability (1)

Two main alternatives:

1. Free intermixing of CM-capable and legacy bridges, CM works across/through legacy
2. CM-capable islands, bounded at legacy eqpt.

Coexistence and interoperability (2)

Free mixing of CM-capable and legacy bridges ?

- No new headers, use (VID+) Priority to select CM controlled (or not)
 - Possibly appropriate, CM only works well if majority of queued traffic CM controlled
 - Other answers complex (VLAN tagging rules)
- Network to customer signaling may be discarded by security (.1af)
 - Would need explicit recognition

Coexistence and interoperability (3)

CM-capable islands ?

- New headers and messages contained, not transmitted to legacy eqpt.
 - Matches limited network (low b/w delay product)
 - Requires low-level (invisible neighbor detect) support in 802.3

Architectural impacts (added costs)

802.1Q:

Specs output queues (counts etc.) only

- Revise .1Q clause 8 revision for input queues ?
- Or for queue counts per input ?
- Explicitly permit or deny

Does not generate frames in response to line-rate traffic

- Only forwarded or terminated frames high speed
- Explicitly permit or deny

Does no ‘per-flow’ queuing

- Clearly prohibit

Document answers as part of 5 criteria costs

Other complex issues

If CM works within and between systems is it:

- Nested, requiring level assignments ?
- Flat, exposing system structure externally ?

Applicability

Long-lived non-TCP flows

- Needs to be explicit

.1Q or not 1Q

To amend, or to produce a stand-alone document?

Questions
