802.1AX Link Aggregation

802.1AX-Rev2-d0.1
Editor’s Report
Version 1

Stephen Haddock
May 15, 2017
Draft 0.1

• Draft generated for first Task Force ballot
  – Change bars relative to draft 0.0 (merge of 802.1AX-2014 and 802.1AX-2014-Cor1-2017)
  – Bulk of changes in Clause 6. Other clauses, in particular Clause 9 (DRNI), have very few updates as of yet.

• Significant changes to Clause 6:
  – Integrate the per-Aggregation Port portions of Conversation-sensitive Distribution and Collection (CSDC) into existing LACP state machines.
  – Modify CSDC Update Mask state machine to correct behavior when defaulted, specify behavior when management changes administrative variables, and (hopefully) clarify information flow.
  – Added informative text on how CSDC works (and a little on why you might want it).
Clause 6 changes:

• Changes don’t affect “normal” operation.
  – Most changes specify response to unusual events such as administrative changes on an active LAG.
  – Explicit specification of some things that were left as “exercises for the reader”.

Example: Merging “Verification machine” into Rx machine

Figure 6-30—Verification state diagram
Example: Merging “Verification machine” into Receive machine

“recordDefaultxxx” only happened at initialization. In Rx machine also happens when enter “DEFAULTED” state.

Per-Aggregation Port machine trying to write to Aggregator Admin defaults to Aggregator variables at a time when no Aggregator selected.

Transition occurs when receive LACPDU (same time as transition in Rx machine), but recognizing these functions have to be executed after the Rx machine functions previously left as exercise for the reader.
Update Mask Machine

Response to administrative changes previously left as exercise for the reader

Comparison previously distributed among other machines. No explicit linkage between results of comparison and its effect on the functions here

These three states previously combined, which does no harm (besides some extraneous processing) but obscures details of which functions need to be executed in response to which events.
Where to start review?

• Read the “Editor’s Introduction to Draft 0.1” on page vi

• If you are somewhat familiar with Link Aggregation:
  – i.e. know basically what is meant by “Aggregation Port”, “Aggregator”, “Distributing” and “Collecting”
  – Start with Clause 6.6. This has new informative text on how “Conversation-sensitive Distribution and Collection” is supposed to work. Hopefully makes it easier to understand basic concepts rather than have to deduce them from variable definitions and state machines.

• Otherwise:
  – Review 6.1 (through Figure 6-2) first. Then review 6.2 (through 6.2.4, then skip to 6.2.8 and 6.2.9).
  – For an overview of Link Aggregation Control and the protocol review 6.3 and 6.4.3.
Backup Slides