Segment Protection Phone Discussion Minutes
April 1, 2009

Bob Sultan

Attendees:

Bob Sultan (Huawei)
Ben Mack-Crane (Huawei)
Vinod Kumar (Tejas)
Abhay Karandikar (Tejas)
Ken Young (Gridpoint)
Steve Haddock
Ao Ting (Irene) (ZTE)
Wu ShaoYong (ZTE)

Notes: Zehavit Alon and Nurit Sprecher (NSN) were not able to attend but they indicated that they would like to expand the scope to include protection for VLAN Bridging. Bob asked if they would provide a presentation on requirement and solutions for this in a future phone meeting. Dave Martin (Nortel) and Panos Saltsidis (Ericsson) both indicated that they couldn't attend this meeting but may be able to attend future meetings. Corona (Wei YueHua – ZTE) had some difficulty dialing in, but she indicated that she plans to attend the meetings.

Agenda: Discussion of draft PAR http://tech.groups.yahoo.com/group/segprot/files segment-protection-draft-PAR.ppt (only slides 1 – 3 were discussed).

Goals: Ken asked what the goal of these meetings would be. Bob suggested that we wanted to converge on PAR text that would be approved for pre-circulation at the May meeting. Ken asked whether there was sufficient technical convergence to achieve this as there were a variety of technical proposals presented in the March meeting and it was not clear whether 'Data Path Protection' would be supported as well as 'Infrastructure Protection'. Vinod explained that there was agreement via email and hallway discussions among the participants that (1) the PAR scope would include 'Infrastructure Protection' (but this would not preclude a distinct PAR for 'Data Path' Segment Protection in the future) and (2) the technical approach would be based on 'redirection' (i.e., no change to the frame). With this level of convergence it was thought to be realistic to seek approval of PAR text for pre-circulation at the May meeting.

Slide 1:

Title may be changed if there is agreement to extend the scope beyond PBB-TE;

'802.1Q 2005' should be changed to '802.1Q'.

Slide 2:

Steve suggested that the term ‘segment’ might be confused with the 802.3 use of the same term. Bob commented that there is an additional problem because we have been using the term ‘segment’ as a synonym for ‘primary segment’, while one might expect that both the ‘primary segment’ and the ‘backup segment’ are ‘segments’. Bob suggested that we should try to agree on terminology before getting too far along. It was agreed that for the draft PAR that we would remove ‘(protected segment)’ from bullet 1 and change ‘primary segment’ to ‘failed segment’ in bullet 2. Suggestions to improve on the term ‘segment’ are welcomed.

Ken raised the issue as that it is not a group of TESIs (ie. <DA, SA, VID>) that is associated with a segment, but rather it is a group of Shared Forwarding Paths (ie. <DA, VID>) that is associated with a segment. It was agreed that the scope text would be updated to reflect this. [Note: I have been using the term ‘Shared Forwarding Path’ to describe this entity. The term ‘Path Tree’ has also been used for this. Please let me know if you think there is an ‘official’ term that I should use].

There was a discussion of the requirement for provisioning along the backup path. Bob commented that there appeared to be two concerns: (1) the provisioning required of the administrator and (2) the number of FDB entries used by bridges along the backup path. For provisioning, it is necessary to specify the list of Shared Forwarding Paths and the sequence of bridges and links forming the backup path with which that list is associated. For FDB entries, in the worst case there is an entry per Shared Forwarding Path associated with the Backup Path in the FDB of each bridge along the Backup Path. There are probably ways in which this number can be reduced, for example, by having Shared Forwarding Paths associated with the Segment identified by a common value of VID in the <DA, VID> tuple.

Ken asked what happens if the FDB uses Shared VLAN Learning. Ben indicated that (so far) the scope has included only PBB-TE Protection, in which case the FDB should be configured for Independent VLAN Learning (although ‘learning’ is not used).

For the bullet on M:1 protection, Vinod agreed to add slides to Bob’s presentation http://www.ieee802.org/1/files/public/docs2009/new-sultan-segment-protection-technical-proposal-0109-v01.pdf to outline a solution for M:1 protection. This will be presented at next week’s phone meeting.

Steve suggested that we should think about how to handle the wording for a PAR item like M:1 protection that is an *option*. In particular, we should determine whether M:1 protection is an option with respect to ‘implementation’ or ‘use’, and specify this clearly.

Slide 3:

Bob will rework the first bullet as the general feeling is that the text is not clear and may not state what is intended. Wording might be simplified to something like “Protection of adjacent segments sharing a common endpoint bridge”.

Steve commented that we might not really want to get into the details of what topologies are, or are not, supported in the PAR. There may be a significant number of corner cases. If you cover one, you might need to cover them all.

It was agreed that we could remove the bullet related to provisioning as this is generally not included in a PAR. [Note: One reason I included this bullet was in response to a concern from Alan McGuire that there must be a way to exclude specific Shared Forwarding Paths from Segment Protection, if desired. This bullet made it clear that Shared Forwarding Paths must be explicitly selected for participation in the segment.].

Steve was asked whether the PAR Scope can include items that are explicitly not in the scope. Steve said yes, and cited the bullet on prohibition against changing the frame to support Segment Protection as an example**.** Steve made the general comment that it’s not a good idea to try to include all details of the proposed standard in the scope.

Regarding the ‘operator requests’ and ‘operational modes’, Ben and Ken felt that it was a good idea to say generally that these would be ‘consistent’ with 802.1Qay. It was also suggested that if, for example, a request type (e.g., LoP) was not explicitly identified in the scope, it could still be included in the specification if people felt it was needed. Vinod volunteered to provide a presentation on the need for LoP and issued related to the hold-off timer, during our next phone meeting.

Wrapup:

We will have another phone meeting at the same time next Wednesday April 8 at 9AM New York time (6:30PM India, 9PM China, etc.).

Agenda will include Tejas presentations on M:1 Segment Protection solution and LoP / hold-off timer and review of a revised version of the draft PAR that will be posted.