

SPB Path Control and Reservation (SPB-PCR)

work proposal

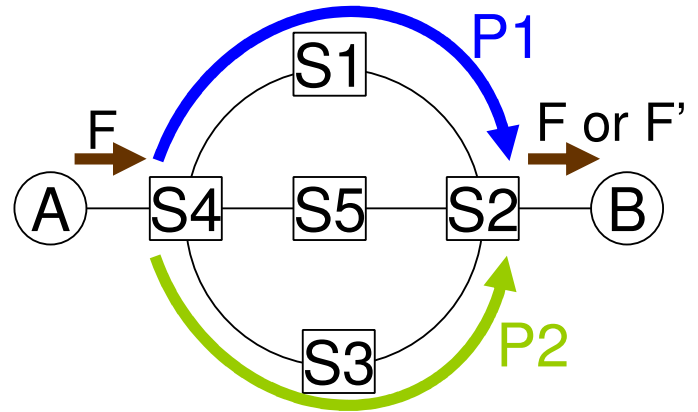
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SPB-PCR

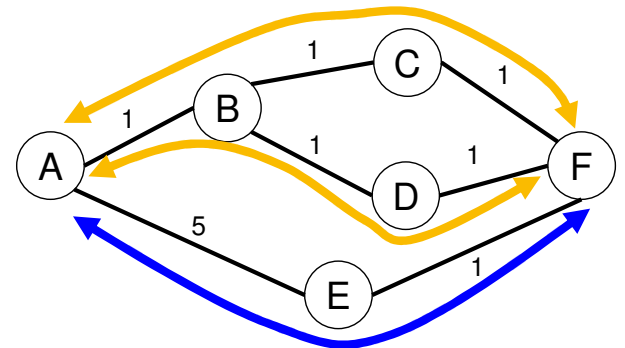
- Enhance IEEE 802.1aq SPB in order to provide
 - Explicit control of choice of forwarding paths
 - thus being able to deviate from shortest path: explicitly engineered p2p and p2mp trees
 - Define bandwidth reservation mechanisms
 - Support for protection schemes (e.g. 1+1, 1:1) such that restoration does not spoil protection
 - Use of IS-IS to flood application parameters, e.g.
 - for 802.1ASbt time synchronization
 - for 802.1Qbv scheduling windows?
- The project involves
 - Leveraging existing technology base where possible
 - IS-IS TE sub-TLVs
 - 802.1 protection switching
 - Potentially specify new 802.1 sub-TLVs to IS-IS in order to provide the additional enhancements

Application Examples

- 1+1 protection
 - Frame F sent by A to B
 - S4 replicates F
 - F and F' are sent to S2
 - F or F' is forwarded to B
 - Neither path P1 nor P2 are updated during IS-IS restoration (at least for a while, and never at the same time)



- Reservation and using a non-shortest path
 - Yellow traffic is forwarded on shortest path
 - Blue traffic has reservation on a non-shortest path



Work Plan

- This meeting
 - Motion for authorizing the September Interim to develop a PAR and 5C on SPB-PCR, and authorizing the 802.1 Chair to pre-circulate the draft PAR/5C to the EC >30 days before the November 2012 meeting
- September Interim
 - Write PAR and 5C
- November Plenary
 - Motion on PAR and 5C
- December
 - NESCOM decision on PAR if it passes Motion at November Plenary