

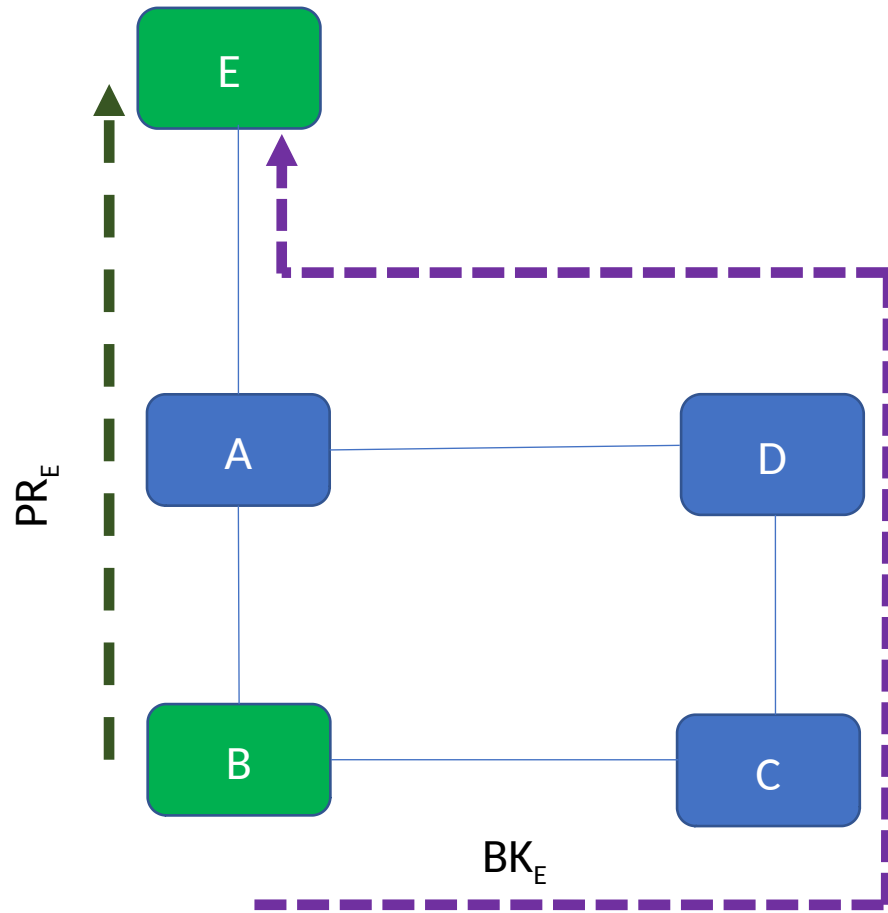
LDP Behavior in link-down scenario

draft-aa-mpls-ldp-link-shut-00

Anush Mohan anush.mohan@ericsson.com

Anupkumar T. anupkumar.t@ericsson.com

TOPOLOGY

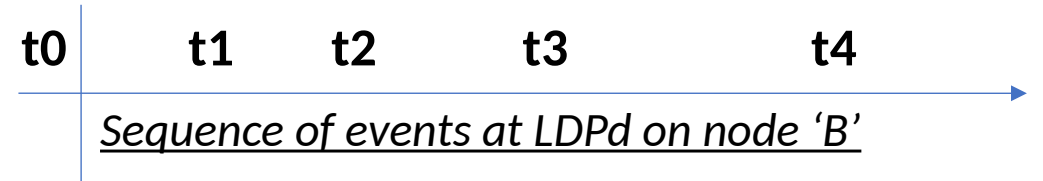
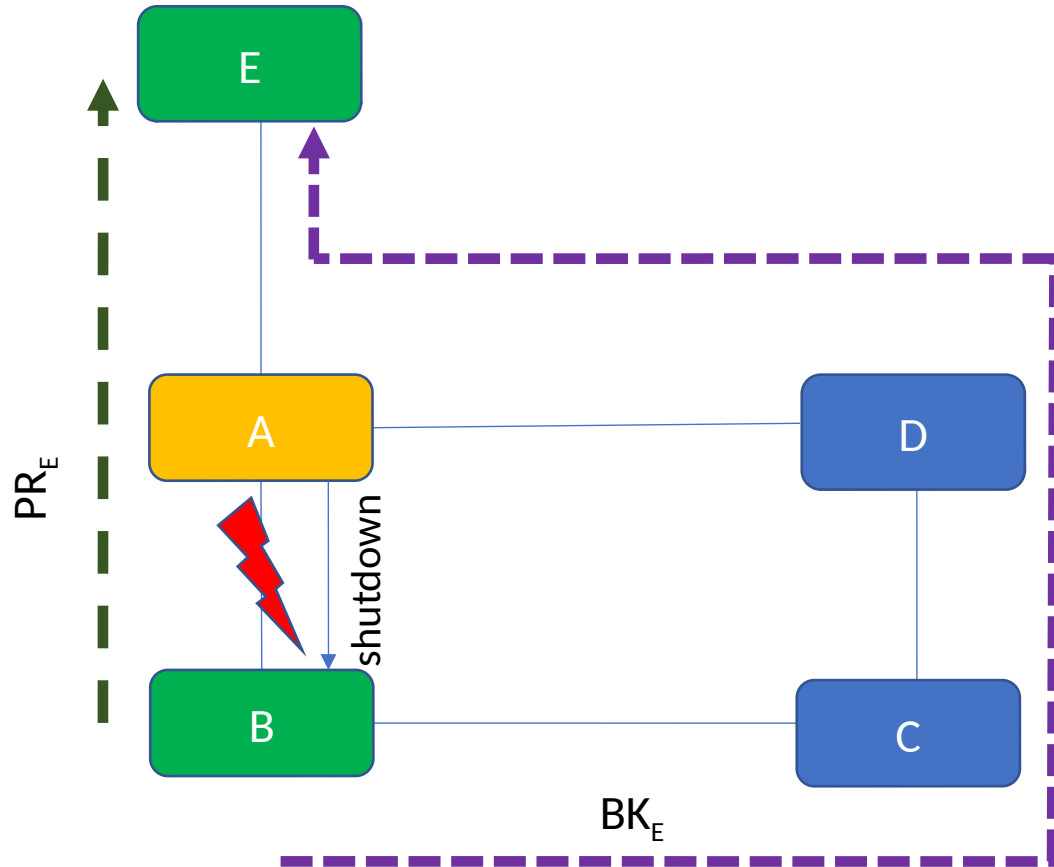


All the nodes are LDP enabled. We have the following LDP LSPs to prefix 'E' at node 'B'

Primary LSP(PR_E) : B-A-E

Backup LSP(BK_E) : B-C-D-A-E

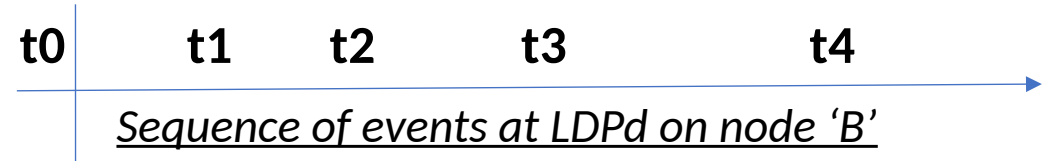
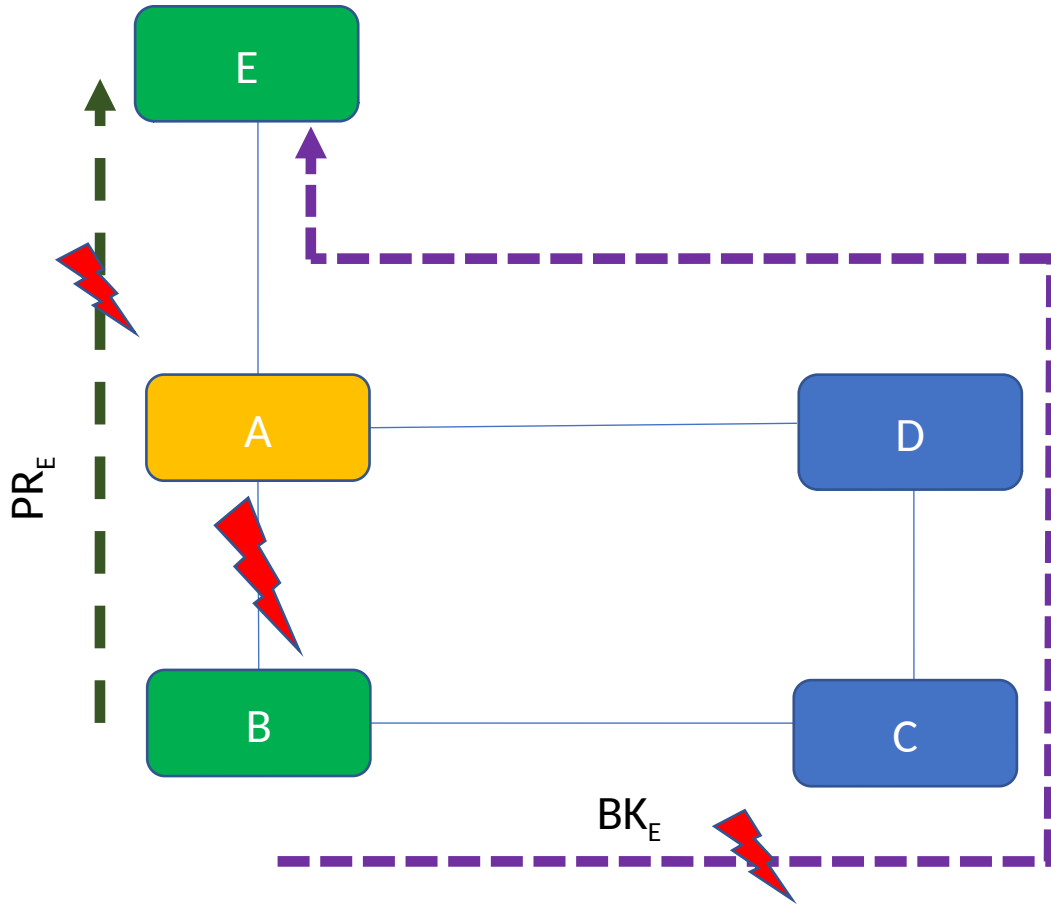
OBSERVED INTEROP ISSUE



t_0 : physical link between node 'A' and 'B' is shut

t_1 : 'B' receives LDP 'shutdown' notification from peer 'A'. (Messages over *tcp* session can reach router 'B' from 'A' as long as some reachability exists from 'A' to 'B')

OBSERVED INTEROP ISSUE CONTD.



t_2 : 'B' tears down LDP Lsp to prefix 'E'. Both PR_E and BK_E (which is tied to PR_E) are deleted.

L2VPN/L3VPN services (on node B) using LDP LSP to node 'E' see traffic loss till PR_E reconverges (post IGP convergence, t_4)

t_3 : 'B' receives link down event for B-A physical link

t_4 : LDP LSP (PR_E) reconverges over 'B-C-D-A-E' path and traffic resumes

Possible Solutions

- Relax requirement of flushing labels immediately on receiving 'shutdown' notification.
- LDP needn't reset session to peer immediately on link 'down' event (i.e. when physical connectivity to LDP peer is down). It would be reasonable to wait for LDP hello adjacency timeout.

Next Steps

- Review, questions, suggestions are most welcome
- WG adoption – post discussion

Thank you!