

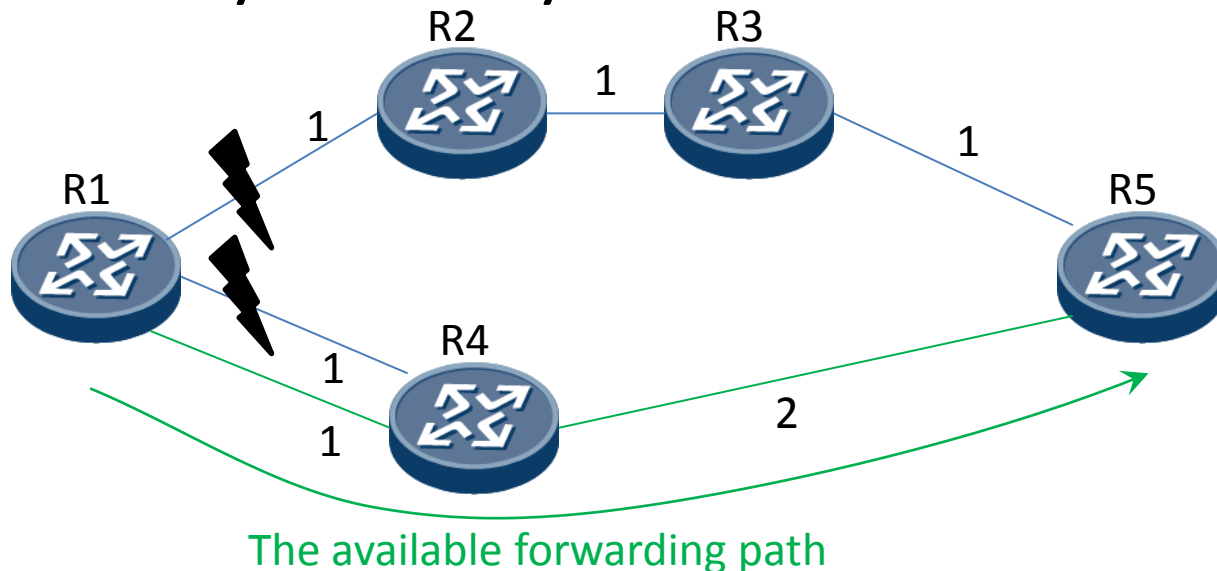
Use Cases Requiring New Features of BFD

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Mingui Zhang, Zuliang Wang, Mach Chen

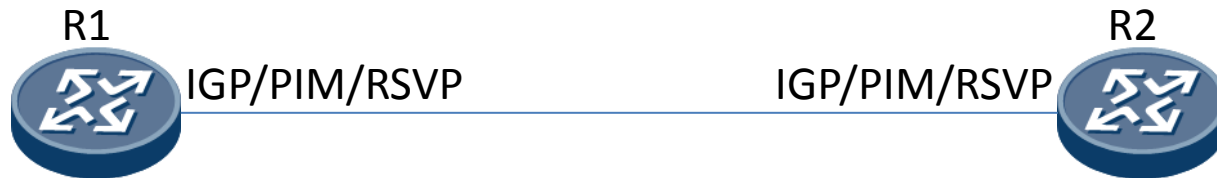
Use Case #1: Detection of Reliable Multipath

- For a reliable multipath, if there is any possible forwarding path, the BFD should not report the failure of the whole multipath.
- REQ: The remained available forwarding paths should be dynamically identified.



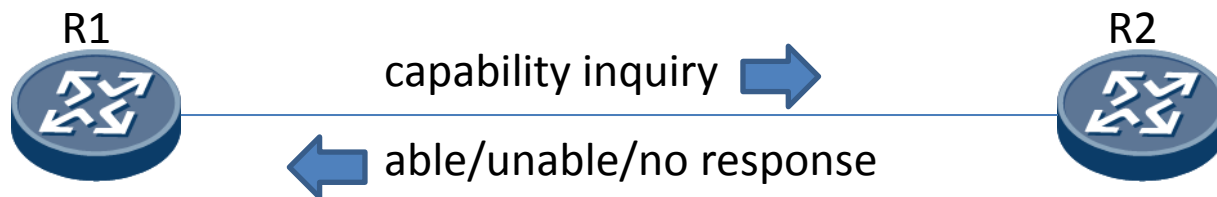
Use Case #2: Application Consistence

- If the detection of a forwarding path is subscribed by multiple applications, the inconsistency of requirements may cause malfunction.
- REQ: the inconsistency should be resolved before the BFD session establishment.



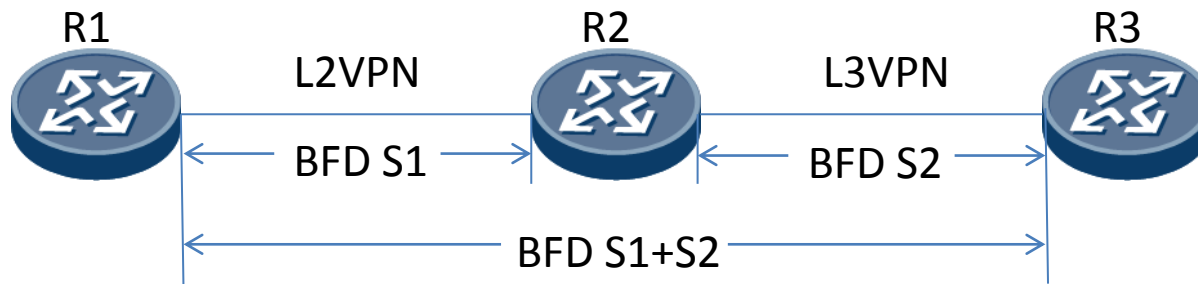
Use Case #3: Capability Inquiry and Feedback

- Suppose the local system reboots (e.g., primary link to backup link). If the remote system has administratively taken down the session or has no resource (e.g., the NP is already crowned with other BFD sessions) to establish a BFD session. This is wrongly treated as a “link down”.
- REQ: Inquiry. If feedback, then the application may determine to use the link even BFD is DOWN.



Use Case #4: State Relay

- For a concatenated path, the interworking system (R2), translates the DOWN state of one BFD session into a diagnostic code and sends it to another BFD session. This can become a heavy overhead to the interworking system when there are lots of BFD sessions need to be concatenated.
- REQ: R2 relays the state of a BFD to another.



Use Case #5: Detection of Asymmetric LSPs

- When the remote system loops back a BFD echo packet for an LSP, it often takes the IP forwarding path rather than the reverse LSP.
- REQ: be able to specify the reverse forwarding path for echo packets.
- It's feasible to meet this requirement through extending the application instead of changing the BFD itself.

Next steps

- Get directions from the WG.
- Updated version based on feedbacks.

Thanks!