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BFD YANG Model and LIME

Lianshu Zheng (editor), Reshad Rahman (editor),
Santosh Pallagati, Mahesh Jethanandani, Greg Mirsky

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What is in draft-ietf-bfd-yang-00

* Support for BFD IP single-hop, IP multi-hop, MPLS-TE tunnel, MPLS-LDP FEC and LAG. No S-BFD support for now.
* Configuration, operational and notification models. No RPCs.
* VRF-centric: augments routing-protocol
* BFD IP single-hop configuration "exported" to routing applications by having a grouping which contains interval(s), multiplier and enabled flag
* Discussions ongoing regarding NOT augmenting routing-protocol, centralizing configuration in BFD (no more in routing applications) etc
* Does **NOT** use/extend LIME model

BFD and LIME concerns

* Having a generic model which fits all networking technologies and OAM tools is no easy task. It's a very big challenge!
* For example the concept of MDs and MAs does NOT apply to all uses of BFD.
* Even if we use IP routing attributes for MDs and MAs, depending on the deployment it might make sense to use different values. E.g. using AS# as MD might make sense in some cases but not for others.
* BFD is a bit different from other OAM tools, once configured it goes on forever and its client apps get notifications

BFD and LIME concerns (contd)

* CFM is more configuration heavy than typical IP OAM, some operators will not like CFM-like configuration model for IP networks.

* There are attributes in the base model which might not be needed by all the technologies, e.g. packet-size and monitor-stats in the RPC

* There are networking technologies (e.g. VXLAN, BIER) on which we might decide to use BFD in the future. Can we ensure that these new uses of BFD will work with the generic model?

Next Steps

* We believe that the BFD YANG model should NOT augment the generic LIME model and that it should be an independent YANG model.
* In the future, LIME might use groupings from BFD for networking technologies which are more "IEEE-like"
* Need to look into how reporting of a failure at a layer could indicate the next layer down e.g. by using identifyref. This is a big task!
* More discussions needed between BFD and LIME teams.