

IETF 104 – Prague

Wednesday March 27<sup>th</sup>, 9:00-11:00

Chairs: Jeffrey Haas, Reshad Rahman

Video recording: <https://www.youtube.com/watch?v=T8tAldE30w0>

Audio recording: [https://www.ietf.org/audio/ietf104/ietf104-athens\\_barcelona-20190327-0900.mp3](https://www.ietf.org/audio/ietf104/ietf104-athens_barcelona-20190327-0900.mp3)

[Agenda]

[Chair Slides (Jeff and Reshad)]

BFD authentication drafts:

Jeff Haas: Need more reviews on authentication drafts. The IPR disclosure from Ciena came out a bit late, non-discriminatory license, doesn't cover license fees. Concern is that BFD is used for "plumbing" and we don't want it subject to licensing fee.

Greg Mirsky: concerned with licensing terms. We wait and see what happens? And then maybe have WG propose alternative solutions.

Mahesh Jethanandani: disclaimer, I am not a lawyer and no longer with Ciena. I approached Ciena to see if they'd relax the terms of the IPR, response was the IPR is in the range of other BFD IPR (with or without a fee).

Greg Mirsky: I understand and I am in the same situation for other drafts. I can point to wording which is more acceptable at IETF, where there's more clarity.

Jeff Haas: please share language with mailing list. Chairs to contact Ciena lawyers .

5884-bis:

Jeff Haas: we will pick it up next cycle

Greg Mirsky: will authors help as authors or reviewers

Jeff Haas: Kireeti has offered to write text on it

draft-mirsky-bfd-mpls-demand:

Jeff Haas: 5880 has concatenated use-case where downstream takes action based on diag field from upstream, open for discussion whether we do errata for this.

Greg Mirsky: errata is to correct and not to clarify. This draft is to clarify things.

Jeff Haas: there is historical precedence where we've done errata for clarifications in BGP

Greg Mirsky: we all have different experience on this. This draft is sufficiently different from 5880.

Reshad Rahman: BFD WG please share your thoughts, up to now it's been Greg/Jeff/Reshad. No known implementations of demand mode?

Greg Mirsky: p2mp actually uses demand mode and there are known implementations

[BFD large packets (Jeff Haas)]

Jeff Haas: we have described reasons for the draft. BFD has nice properties, there are known disadvantages of ISIS padding (BGP and OSPF don't pad). Main question remaining is whether BFD is the right place for this. Albert is looking into making BFD changes to try this out.

[BFD unsolicited (Reshad Rahman)]

Reshad Rahman: main change from previous revision is the addition of the YANG model. We will change the "allow" leaf to "enable"

Acee Lindem: it makes sense to have the functionality described in this draft

[BFD For Geneve (Xiao Min)]

Xiao Min: Geneve supports multiprotocol (which VxLAN doesn't), it's the only standards track encaps in NVO3. Can carry L2 (as VxLAN does) but also MPLS and IP. Scenario 1 is Geneve packet is type IP. 2nd scenario, BFD over Geneve (no IP), new protocol. We need to discuss whether scenario 2 is needed. Unified scenario: OAM shim used to indicate BFD control packet.

Matthew Bocci (NVO3 chair): you should ask NVO3 WG whether non-IP is needed

Reshad Rahman: Matthew is requesting that you ask the question wrt scenario 2 in NVO3 WG

Jeff Haas: Matthew, please help to push review for this in NVO3 WG

Reshad Rahman: when will be OAM shim header be decided?

Xiao Min: it is being discussed right now

[BGP strict mode (Mercia Zheng)]

Mercia Zheng: strict mode prevents BGP establishment until BFD is up. Backwards compatibility section will be revised. More work is needed on BGP state transitions

Ville Hallivuori: idea is good. Why do you need capability, why don't have config for that. We have already implemented this.

Jeff Haas: counter argument to what Ville said, hold-down mode (Juniper v/s Cisco interop) leads to lock. Some clarification is needed whether capability is needed.

Keyur Patel: we can do this without capability, by default strict mode.

Acee Lindem: we want this capability, there are reasons where you may or may not want strict mode. Openconfirm mode until BFD is established.

Keyur Patel: we do the same at Arccus.

Jeff Haas: it is worth clarifying, because we've had interop issues. Needs to be solved, supportive. Proper WG is IDR, although BFD wants to be aware of this.

Les Ginsberg: odd to have this in BFD, should be IDR

[OSPF strict mode (Ketan Talaulikar)]

Ketan Talaulikar: same problem as in BGP. Both for OSPFv2 and v3.

Greg Mirsky: consider add BFD timers in the capability? Allows BFD to come up faster.

Les Ginsberg: based on deployment ISIS, I see no need for this

Reshad Rahman: what happens when you enable strict mode while OSPF up?

Ketan Talaulikar: we do not disturb session which is up when BFD strict mode changed

Mercia Zheng: same in BGP

Les Ginsberg: make sure you handle transitions properly (based on ISIS experience)

Ketan Talaulikar: done with explicitly config right now, but some interop issues. Hence the need for clarification.

Greg Mirsky: need to take down BFD from OSPF?

Jeff Haas: BFD admin down is there for that reason

Ketan Talaulikar: we have text which says BFD admin down does not bring down OSPF adjacency

Acee Lindem: for OSPF we have 2 mechanisms for peer going away: goodbye hello, and we have adj less desirable using link attribute

Reshad Rahman: why this needed now? ISIS did this ~15 years ago

Ketan Talaulikar: recent interop issues

Les Ginsberg: long overdue

Mercia Zheng: same with BGP. RFC5882 explains this issue

[Extended BFD (Greg Mirsky)]

Greg Mirsky: if we lose every other BFD packet, BFD stays up but no idea of loss. Length field reflects BFD control message length. Capability negotiation using poll sequence and capability TLV

Reshad Rahman: why BFD, same question as on large packets. TWAMP/OWAMP do this. Is it because you want BFD to go down?

Greg Mirsky: came out of RIFT, zero-touch provisioning. BFD comes up when boxes are started, why not add other capabilities? Can do it as P/F sequence, not every control packet

Jeff Haas: there are motivations for extended BFD. Is there anything in BFDv1 (after control message) which will break authentication?

Greg Mirsky: so we extend after authentication.

Jeff Haas: that means that authentication doesn't cover the extension part. We need to discuss what this does to authentication

Jeff Haas: we need to decide when to do BFDv2, and we need to be careful about backwards compatibility

Jeff Haas: TLVs, h/w guys don't like them. Need to look at extensible data

Greg Mirsky: motivation to use RFC6374 because it's predictable size data.

Jeff Haas: don't use arbitrary TLVs

Acee Lindem: leave BFD alone, do new protocol if you want TLVs. Recall ezchip LCs

Greg Mirsky: P/F goes to control-plane (most of the time), that's what we want to extend poll mode. Impact on async mode is lesser that way.

Keyur Patel: we appreciate the fixed packet format and fixed lengths. Can use static buffers etc. With variable length we'd need to have a cap.

Jeff Haas: IETF has been in need of a more generalized OAM protocol for a while. Do we need to start BFDv2?

Greg Mirsky: involved in TWAMP/OWAMP and now STAMP, appreciate discipline of RFC6374, more h/w friendly than the WAMP protocols.

