Return Path in SFC OAM


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What we want

• OAM has four modes to control the path of Echo Reply:
  • Do Not Reply
  • Reply via an IPv4/IPv6 UDP Packet
  • Reply via Application Level Control Channel
  • Reply via Specified Path

• In SFC we want to specify an SFP as the return path of Echo Reply
  • One use case: For bi-directional SFC a reverse SFP is indicated in Echo Request so that such SFC can be checked in both direction.
What we do

• Define a new TLV: Reply Service Function Path TLV in Echo Request to indicate the specified return SFP.

![Diagram of Reply Service Function Path TLV]

• The format of Reply Service Function Path
  • Reply Service Path Identifier indicates the SFC path of Echo Reply
  • Service Index is used for the forwarding of the Echo Reply

![Diagram of Reply Service Path Identifier and Service Index]
Operation of the SFC OAM with specified return path

• Set the the value of Reply Mode field to be "Reply via Specified Path", and include SFC Reply Path TLV in the Echo Request message.

• The SFPIID in the SFC Reply Path TLV is the identifier of the reverse SFP.

• The Echo Reply should use the SFPIID and SI as its NSH header, and
  • If the return SFP cannot be found, the Echo Reply should include "Reply SFP was not found" in Return Code.
  • If the Reply Path TLV is not provided in the Echo Request with “Reply via Specified Path”, the Echo Reply should include “Reply Path TLV is missing” in Return Code.
Next steps

• Comments, questions always welcome and greatly appreciated
• WG adoption?