SFC Path Consistency OAM

https://tools.ietf.org/html/draft-ao-sfc-oam-path-consistency-00
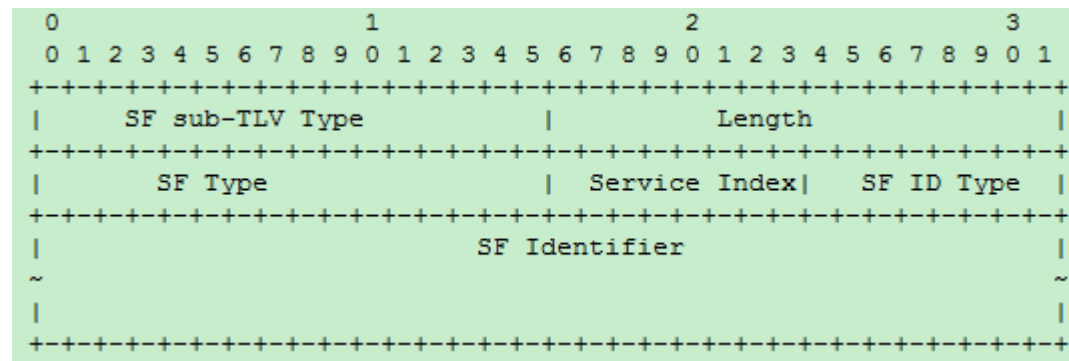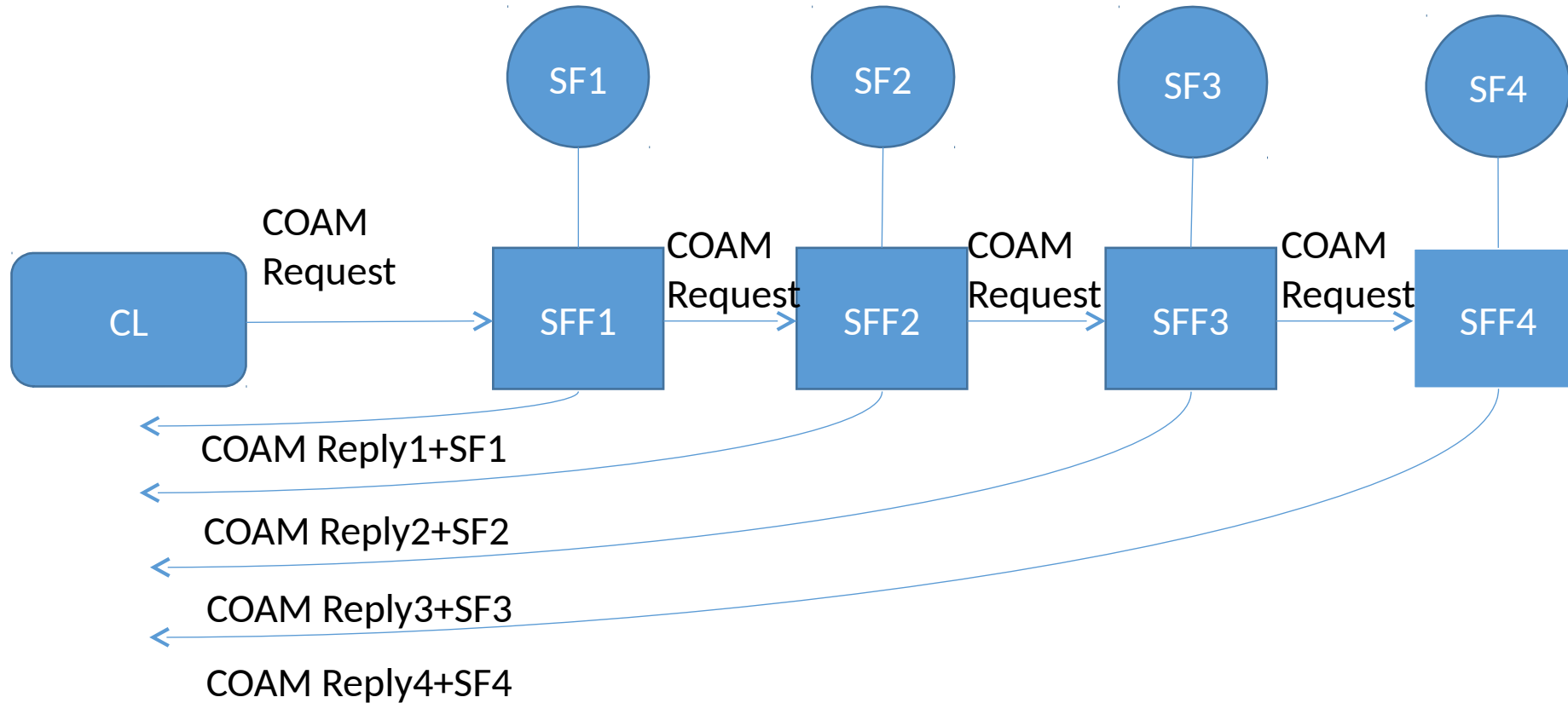
Background

- SFC ： A chain with a series of ordered Service Functions.

- SFC OAM: Operation, Administration and Maintenance (OAM) for Service Function Chaining(SFC)

  - OOAM(overlay OAM) is one solution for SFC OAM which is inband OAM

  - https://tools.ietf.org/html/draft-ooamdt-rtgwg-demand-cc-cv-03

- Path Consistency: Every SF the packet transmitted is consistent with SFC provision.

- COAM: OAM that can be used to check path consistency.

COAM Messages

- COAM Request: SFP Consistency Echo Request
  - Send from ingress SFF first, and forwarded by every intermediat SFF.
- COAM Reply: SFP Consistency Echo Reply
  - Every SFF receiving the COAM Request, will send back a COAM Reply .
  - The COAM Reply message contains the information of SF that is connecting the SFF as a sub-TLV.

```
 0                   1                   2                   3
 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|       SF sub-TLV Type         |             Length            |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|        SF Type                | Service Index|   SF ID Type   |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                         SF Identifier                         |
~                                                               ~
|                                                               |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
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Theory of Operation in COAM

- With gathering COAM Reply1,COAM Reply2,COAM Reply3 and COAM Reply4, the path of the chain: SF1->SF2->SF3->SF4 is confirmed.

Next steps

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