Interworking of SFC and its underlay network

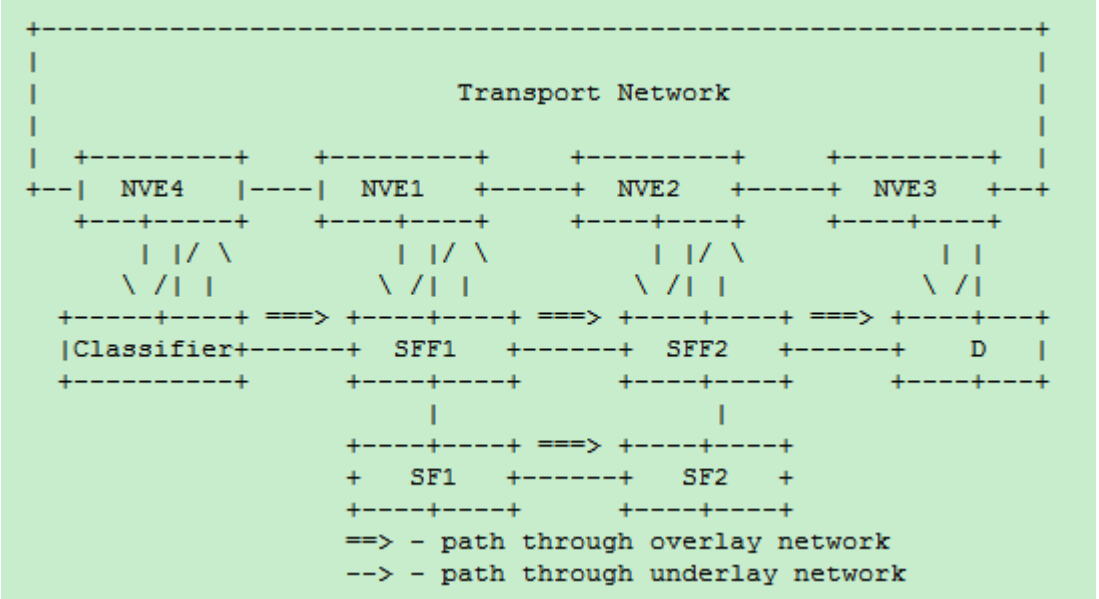
https://tools.ietf.org/html/draft-ao-sfc-overlay-02

Ting Ao, Greg Mirskey

Problem

- At present, SFC is based on they are transmitted over an Overlay Network(See NSH draft section 7). Take Geneve as an example, if SFF and NVE are co-located, NVE knows how to encapsulate the NSH packet with an Overlay Header and forward it to the right NVE.
- But, for the case of SFF and NVE splitted, NVE don't know how to forward the NSH packet to the right SFF because it doesn't know which NVE is next hop

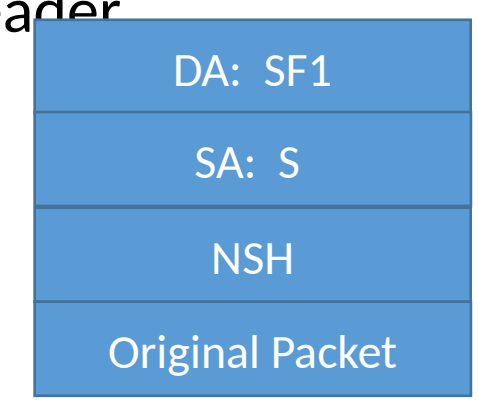
According to the SPI in NSH, SFF1 knows its next hop is SFF2, but NVE1 doesn't know its next hop is NVE2.



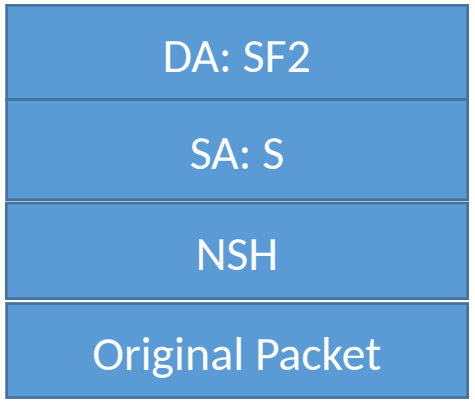
Our proposal to NSH draft

- Specify how to add NSH for an original packet
  - When add a NSH header, how to encapsulate the orginal packet including IP h eader or Ethernet header.
- When SFF find the next hop in SFC, it should
  - Find the next hop address according to the SFP ID in the SFC header of the pa cket.
  - Replace the destination address to the next hop address in the IP header or Et hernet header

Take SFF1 as an example, the packet to/from SFF is:



NVE1->SFF1



SFF1->NVE1

- Comments, questions always welcome and greatly appreciated