

# Geneve applicability for service function chaining

draft-boutros-nvo3-geneve-applicability-for-sfc-02

Sami Boutros

Dharma Rajan

Philip Kippen

Pierluigi Rolando

IETF 103, November 2018

Bangkok

# Geneve applicability for service function chaining

- 2 Control plane Options:
  - One with NSH SPI/SI forwarding tables passed to all SFF(s).
  - One with NSH SPI/SI along with a Geneve option TLV for the service function list forming the SFP passed to only the classifier/ingress SFF.
- Geneve next protocol=NSH Ethertype
  - To carry NSH base, path information and context.
- NSH Protocol = inner packet original protocol.

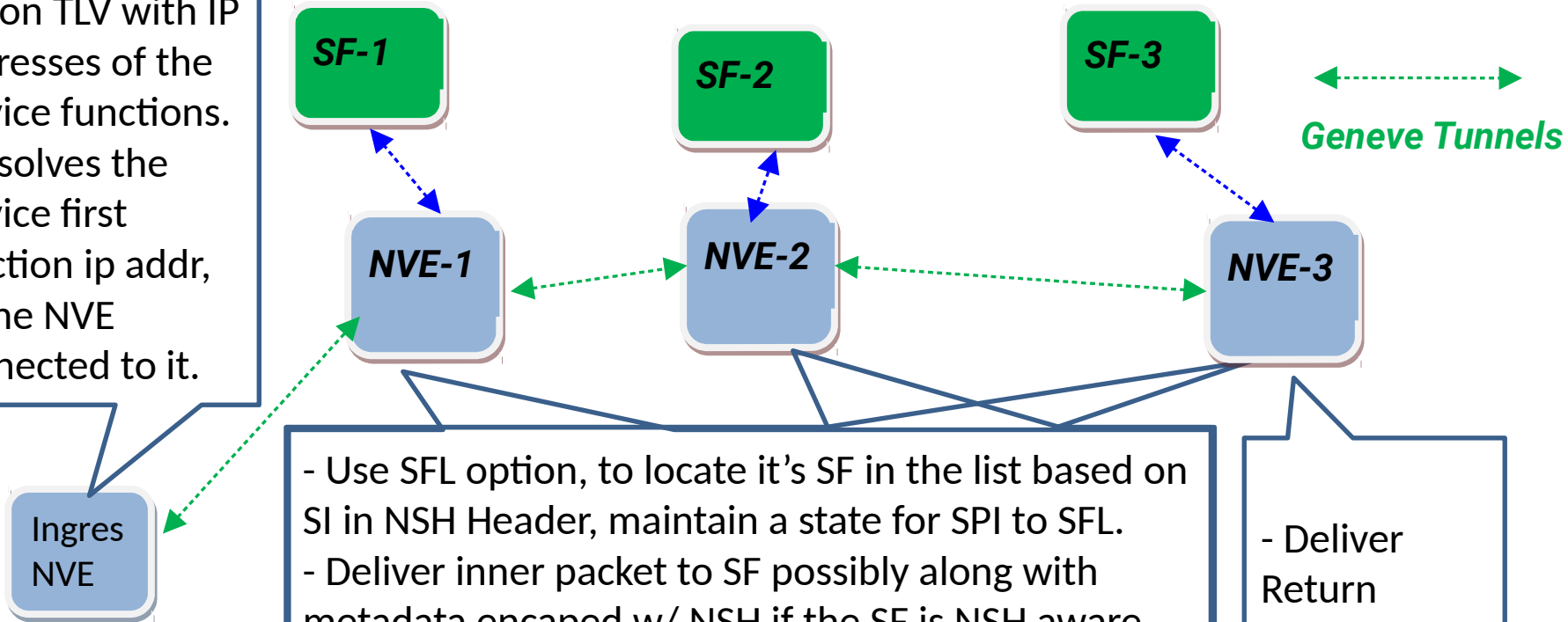
# Geneve applicability for service function chaining

- New Geneve option TLV for the service function list forming the SFP.
  - Encodes list of service function ip addresses.
  - A sub-tlv for HMAC for security following procedures described in [[draft-ietf-6man-segment-routing-header](#)]
- Geneve next protocol=NSH Ethertype
  - To carry NSH base, path information and context.



# Geneve applicability for service function chaining

- Based on a classification set the service function list (SFL) option TLV with IP addresses of the service functions.
- Resolves the service first function ip addr, to the NVE connected to it.



- Use SFL option, to locate it's SF in the list based on SI in NSH Header, maintain a state for SPI to SFL.
- Deliver inner packet to SF possibly along with metadata encaped w/ NSH if the SF is NSH aware, or using other ether encapsulations.
- For return packets, the NVE node, locate the SFL from the SPI/SFL state maintained, resolves the next service function ip address, to next NVE connected to the service function.

- Deliver Return packets to customer destination

# Acknowledgement

- The authors would like to acknowledge Jim Guichard for his valuable comments on this document.

Thank you

# Next steps

- Seeking comments?

Thank you