

# Map-Assisted SFC Proxy using LISP

draft-cabellos-sfc-map-assisted-proxy-00.txt

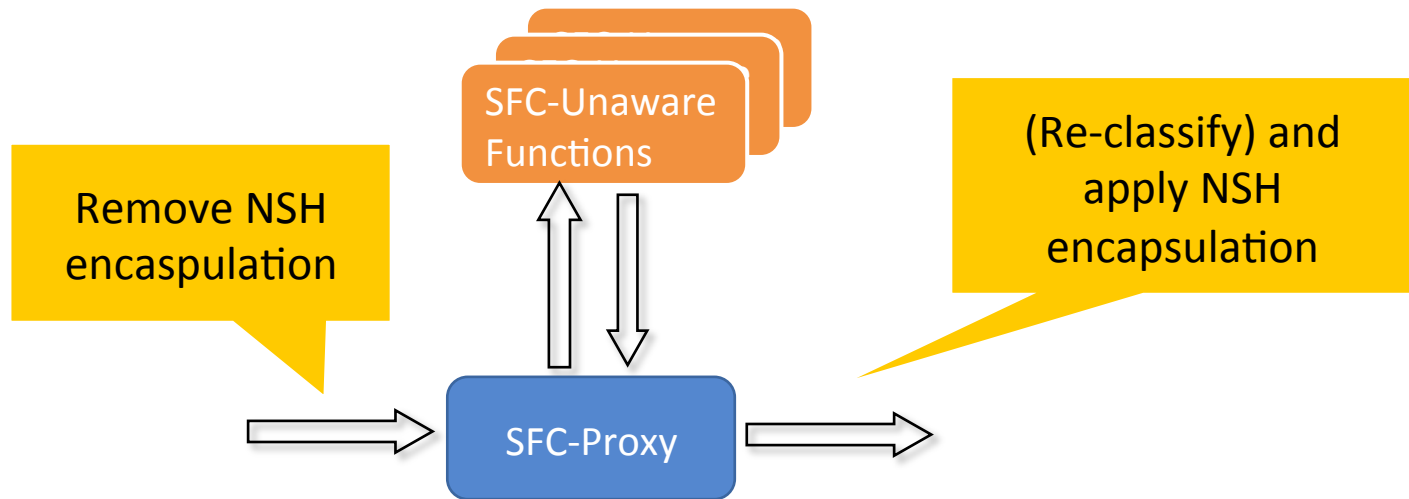
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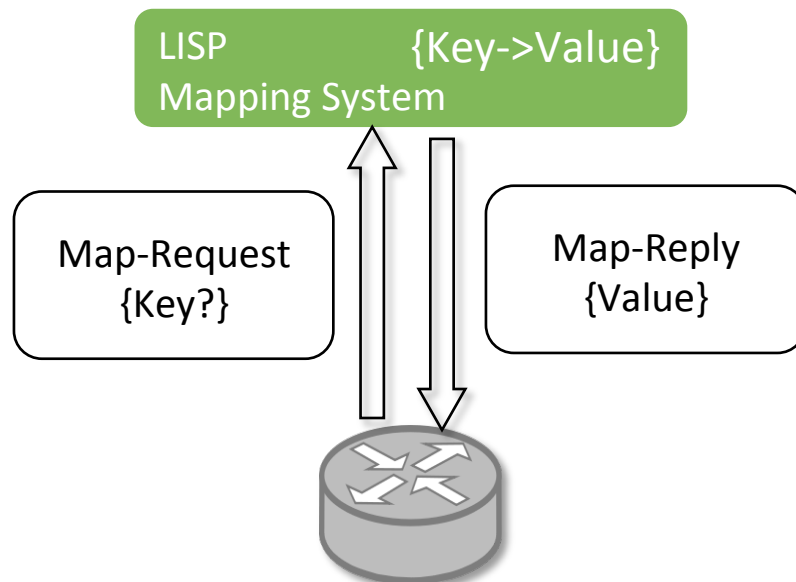
# SFC Proxy

- An SFC Proxy acts on behalf SFC-unaware functions
- SFC Proxy decapsulates, sends to function and (re-classifies) and re-encapsulates.

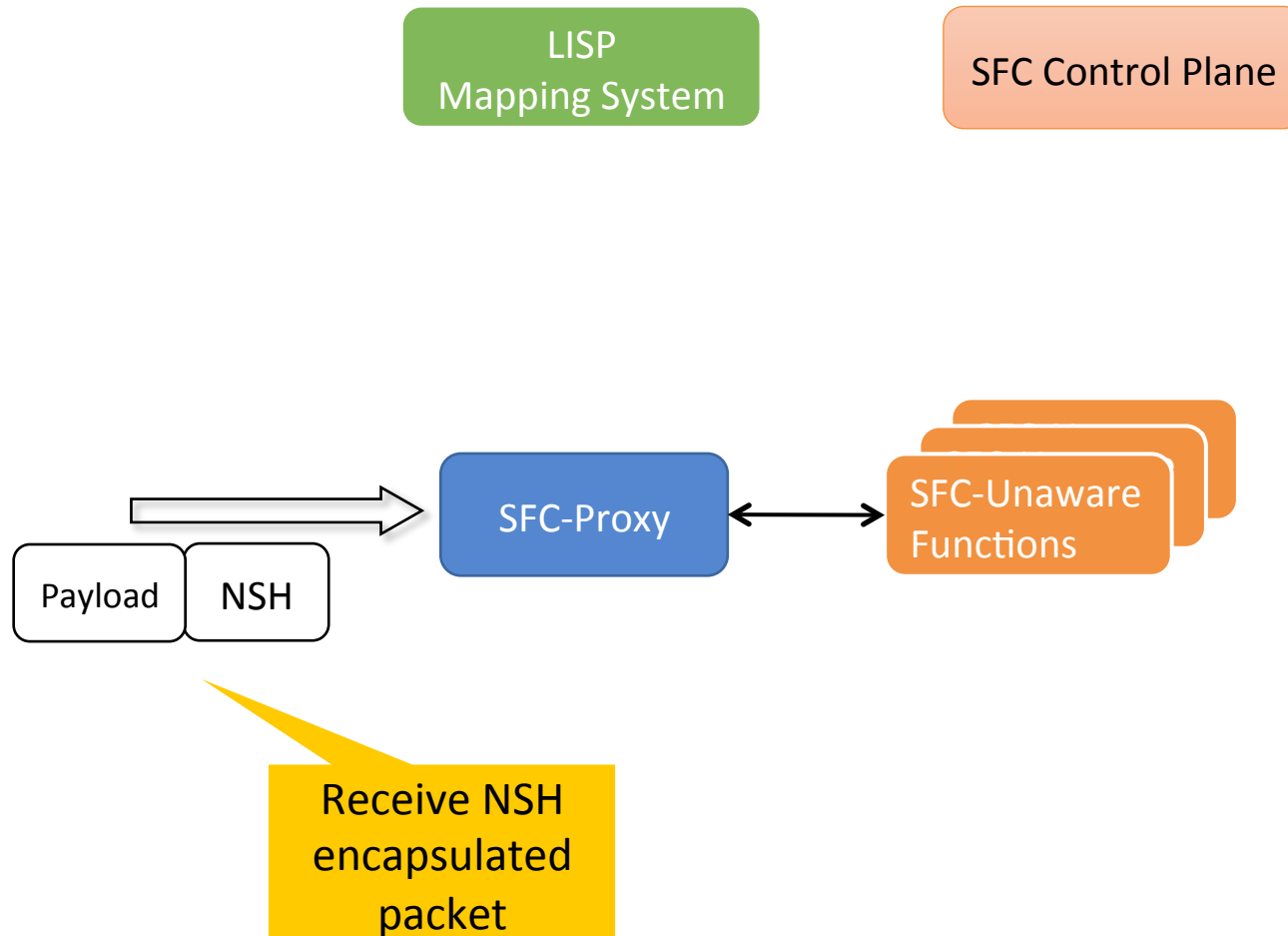


# Map-Assisting: RFC6830

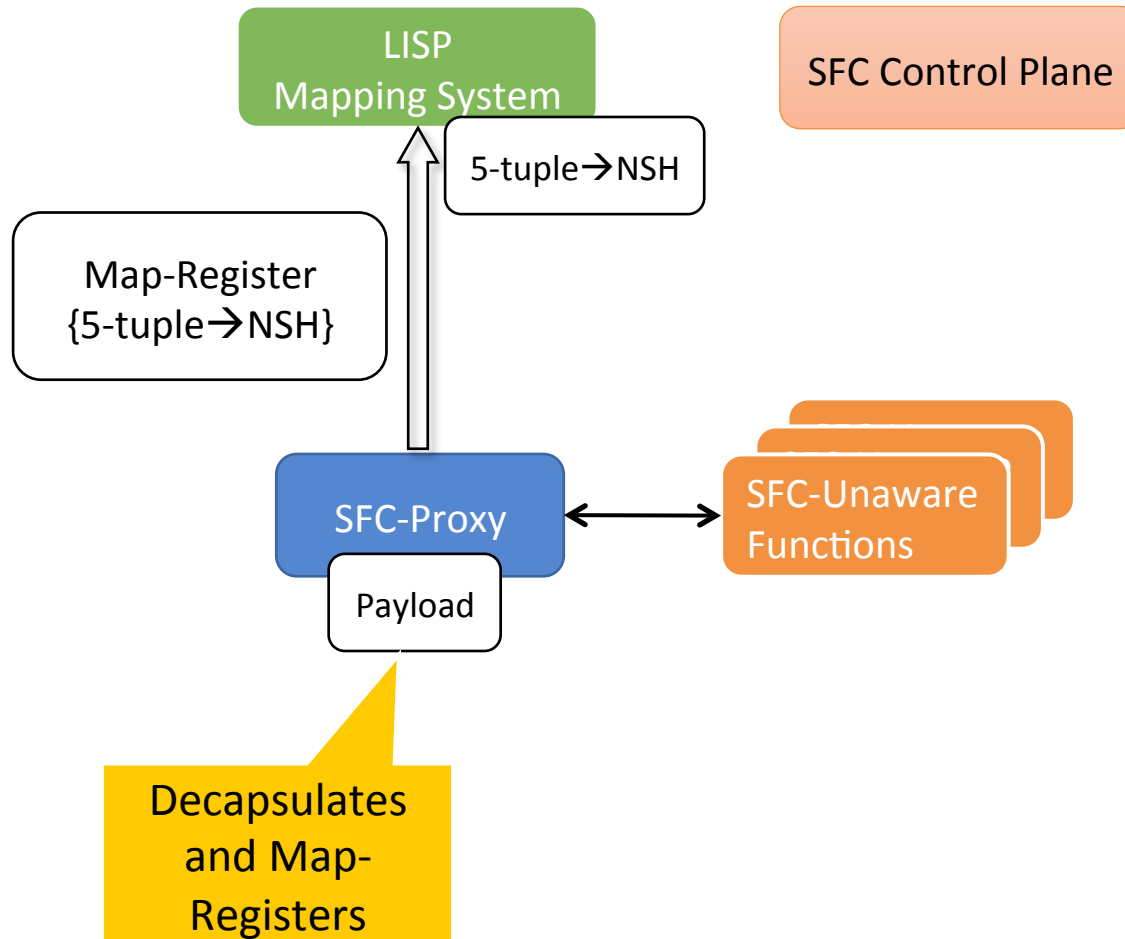
- LISP (RFC6830) offers a standard interface to Map-Assist any data-plane element
- LCAF (draft-lisp-lcaf) offers some flexibility on the semantics of key and values



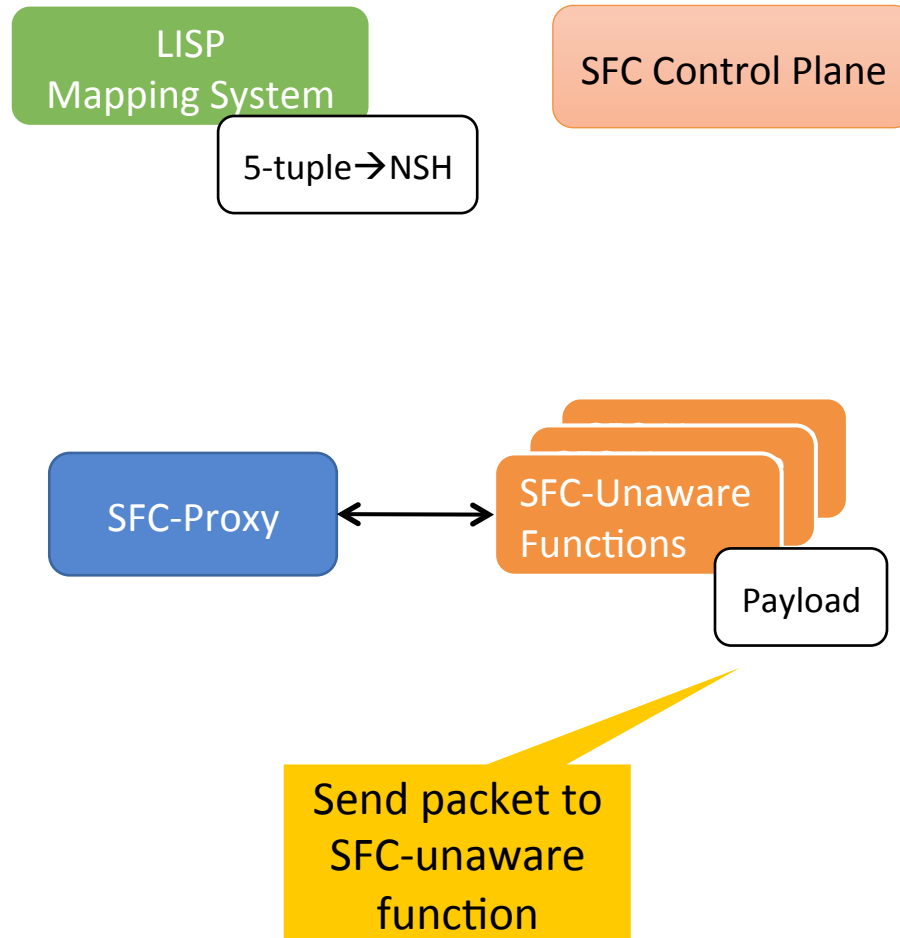
# 1.- Map-Assisted SFC-Proxy



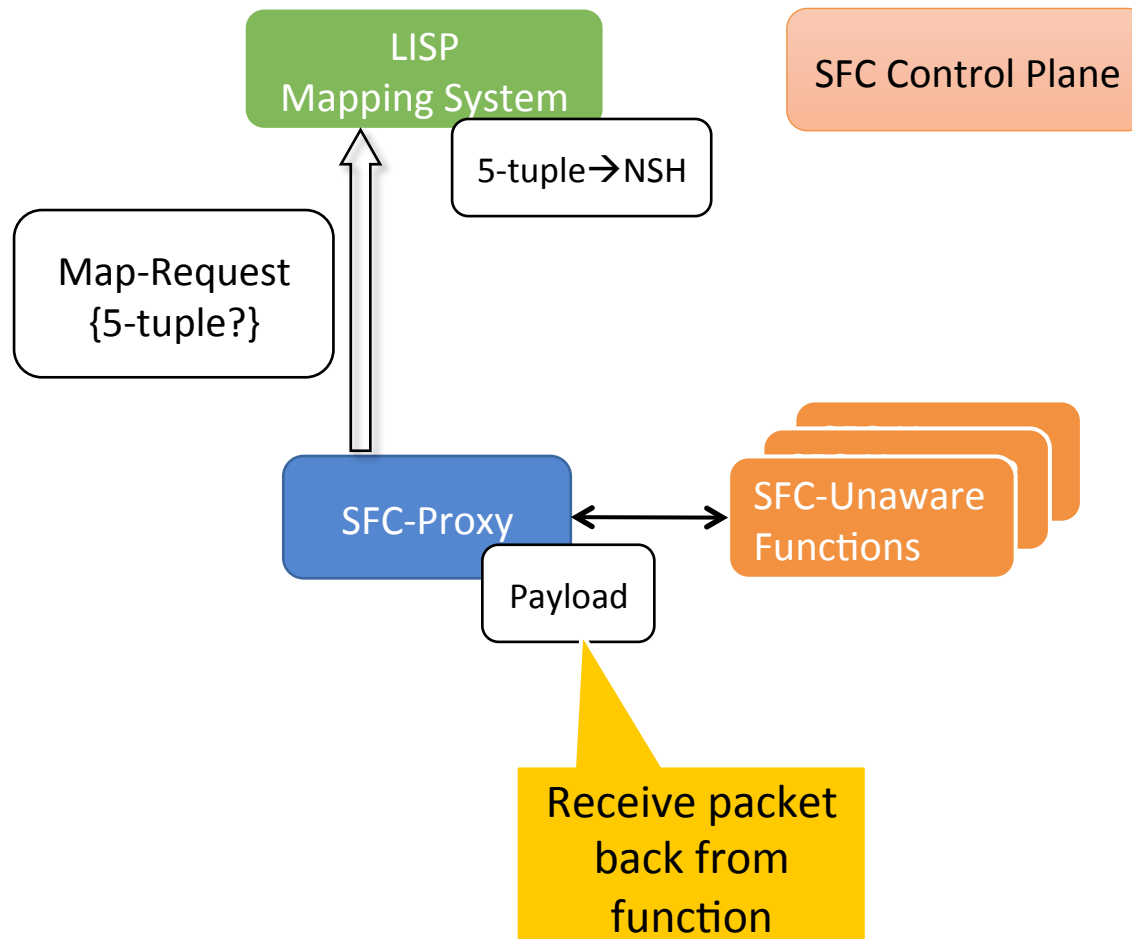
## 2.- Map-Assisted SFC-Proxy



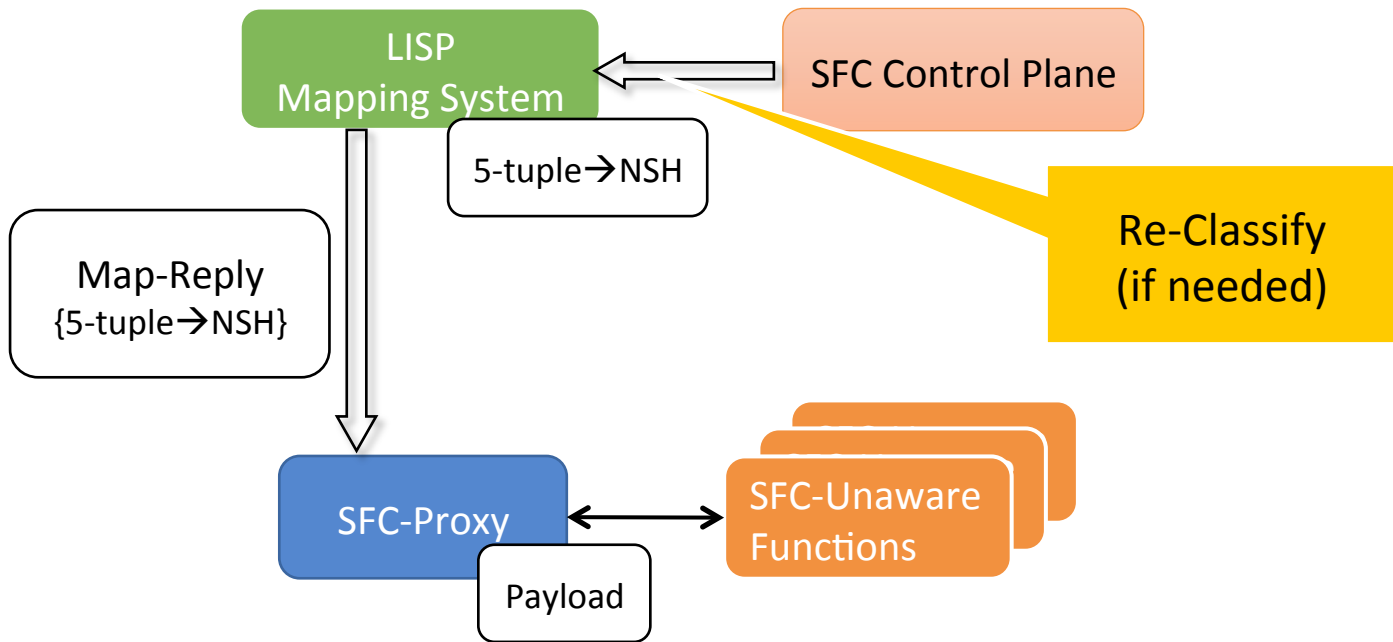
# 3.- Map-Assisted SFC-Proxy



# 4.- Map-Assisted SFC-Proxy

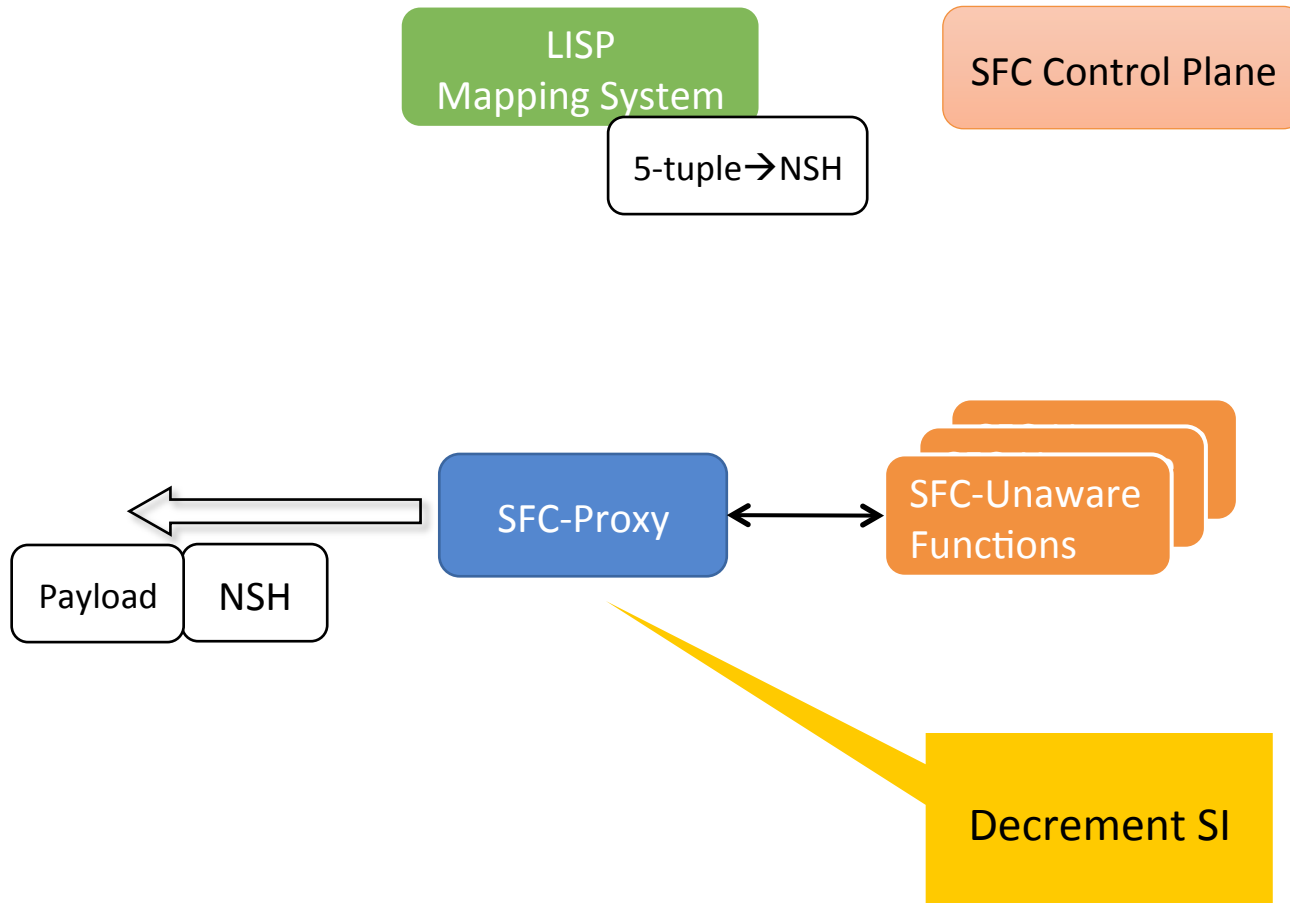


# 5.- Map-Assisted SFC-Proxy





# 6.- Map-Assisted SFC-Proxy



# Benefits of Map-Assisted SFC-Proxy

1. Stateless and connectionless
2. Enables re-classification by the SFC Control Plane
  - In some cases the SFC Unaware function may change the original payload

# Encoding 5-tuple and NSH

- 5-tuple is encoded using draft-lisp-lcaf, as specified in draft-rodrigueznatal-lisp-multi-tuple-eid
- NSH (Base Header, Service Path Header and Context Headers) is encoded using JSON Data Model Type (draft-lisp-lcaf) in binary format
- No LISP extensions are required

# Future Work

- Proof-of-concept with:
  - Open Overlay Router ([openoverlayrouter.org](http://openoverlayrouter.org))
  - OpenDayLight
    - SFC
    - LISPFLOW Mappings
- Support for a function to be skipped (if for instance it is overloaded)
- Beyond 5-tuple
- LISP should be aware of the SFC Proxy ID

