

Network Service Header (NSH)

draft-quinn-sfc-nsh

IETF 89

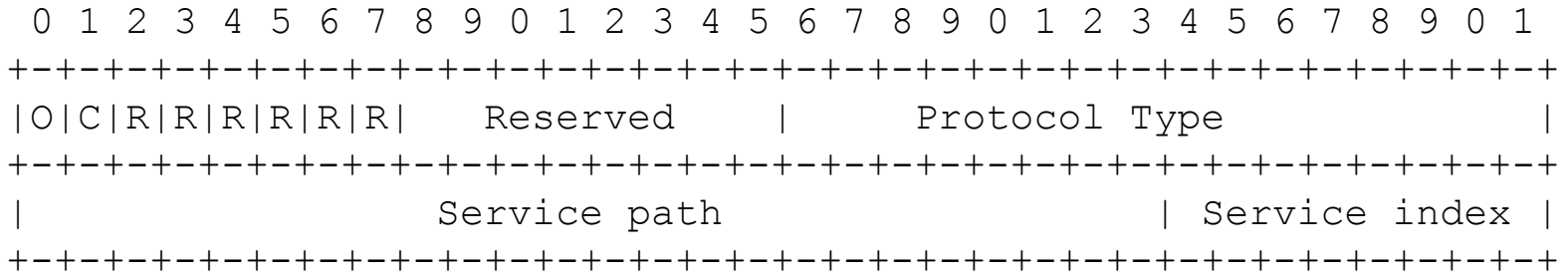
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Document High Level Summary

- Describes a dataplane header used to carry information along a service path.
 - Identifier for service path selection
 - Opaque metadata fields
- Creates “service plane”
 - Transport independent (NSH in VXLAN, NSH in MPLS, NSH in UDP, etc.)
 - Service layer OAM
- Implemented on several platforms, including open source

Base Header

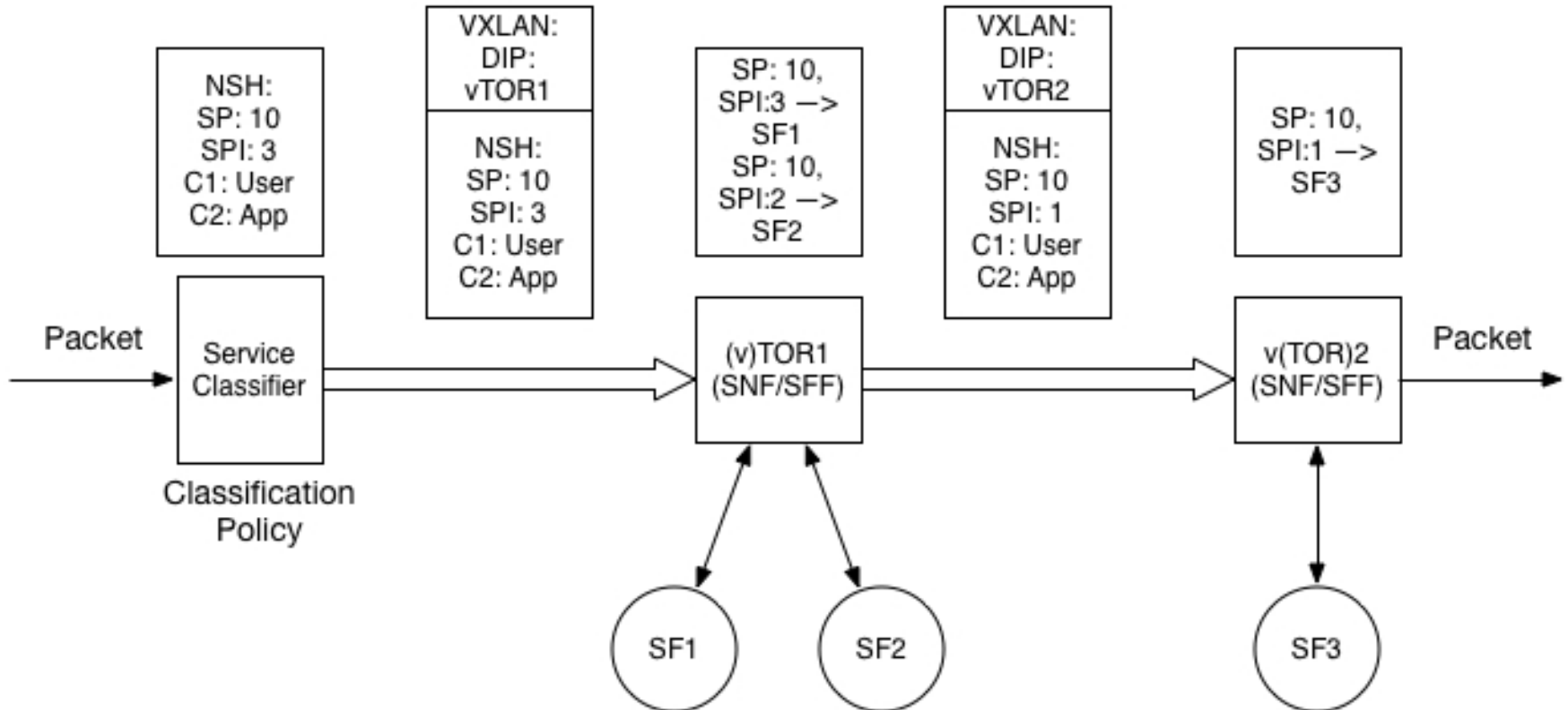


Flags: 8
Reserved: 8
Protocol Type (PT): 16
Service path (SP): 24
Service index (SI): 8

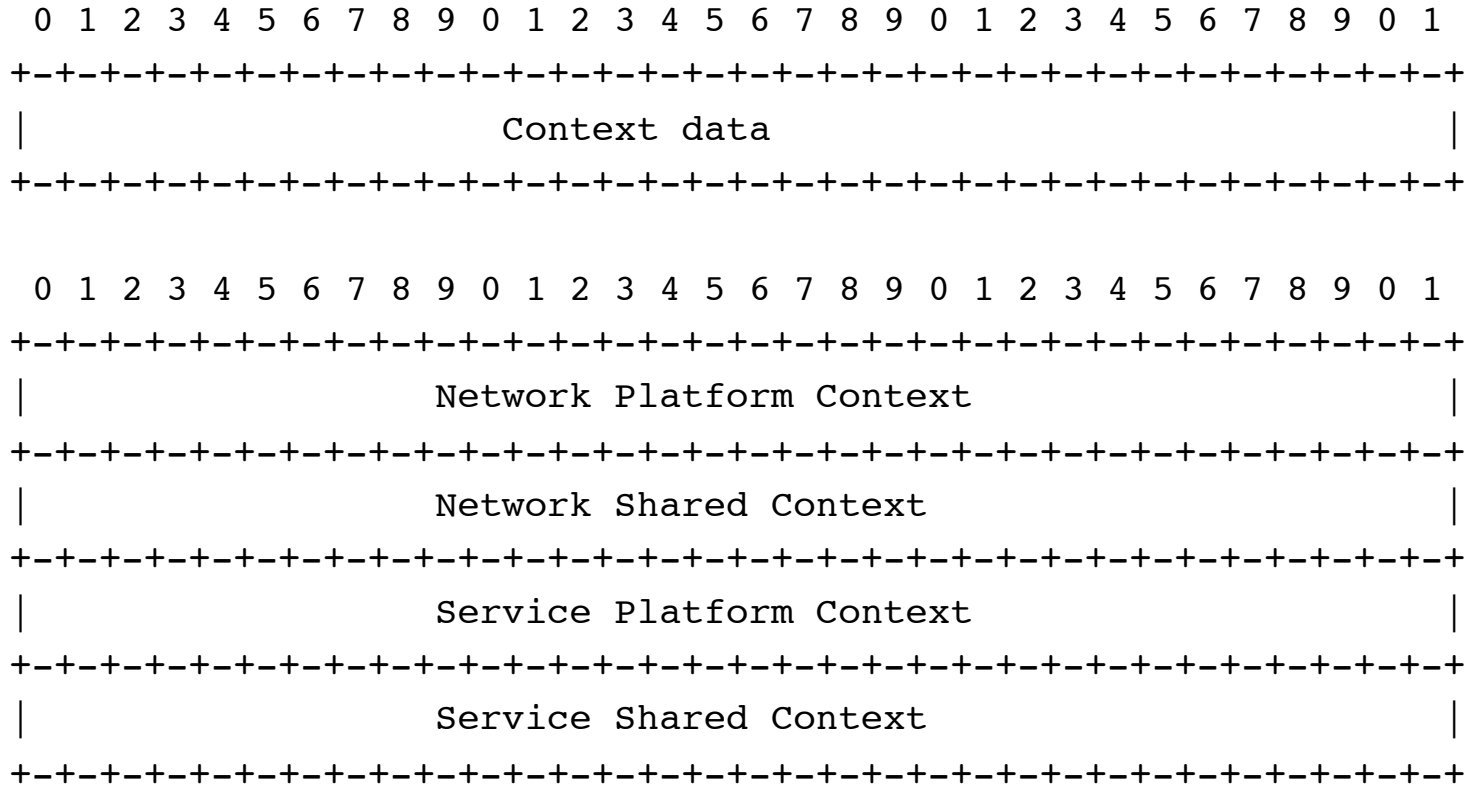
Path Identification + Index

- Service Path (SP) identifies a service path (not a chain)
- SP is not used for transport → enables transport selection
 - Let the network do its thing
- Can be changed: branching within a service graph
 - Re-classification (and therefore policy) decision
- Index conveys node within the graph

NSH: Path ID and Index



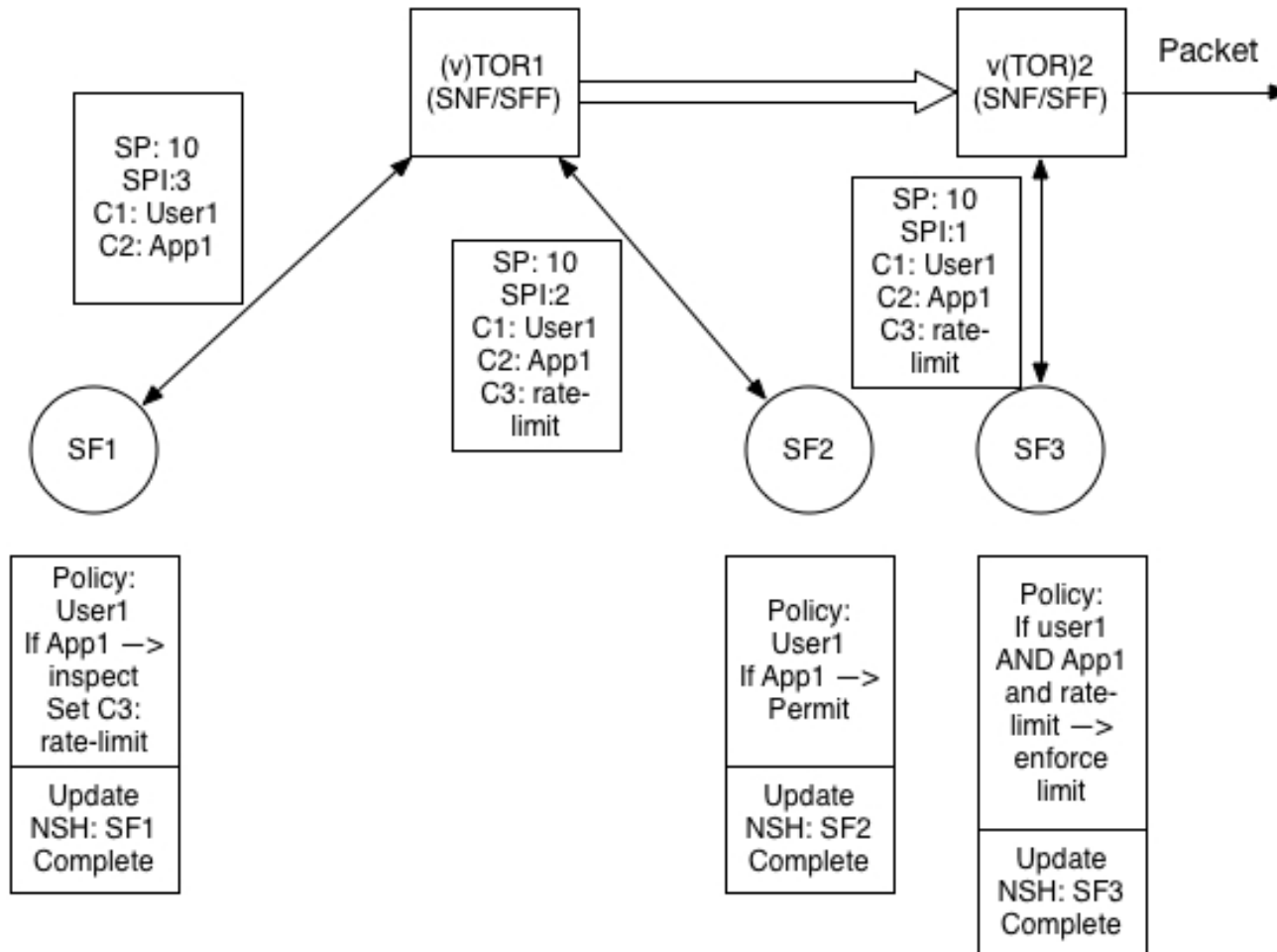
Context Headers



Metadata

- Opaque → semantics assigned via a control plane
 - Common metadata: application ID, user information, forwarding context
- Suggested allocation in the draft
- De-facto assignment per “use case” seems likely
 - Mobility vs. data center

NSH Metadata and Policy



Next Steps

- Continue to collect feedback from the SFC community
- Continue to evolve protocol based on deployment feedback
- Adopt as a working group document: SFC encapsulation
 - Submit to IESG Standards Track document specifying the generic service function chaining header encapsulation