Service Function Chaining: Subscriber and Policy Identification Variable-Length NSH Context Headers

https://tools.ietf.org/html/draft-sfc-serviceid-header-01

SFC WG Meeting

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Mohamed Boucadair, Dirk von Hugo, Behcet Sarikaya

Agenda

- The Problem

- The Solution

- Updates vs. [draft-sarikaya-sfc-hostid-serviceheader](#)

- What is Next?

On Policies

- Some service deployments require **enforcing policies** based on the internal IP address/prefix, a subscriber identifier, or a combination thereof.

- Also some services require **differentiated policies** (e.g., low latency, high resiliency, etc.)
  - SF invocation should be altered accordingly

- These policies may be enforced by **one or multiple Service Functions**

- These SFs may be **located anywhere within an SFC-enabled domain**

- The exact set of policies to be enforced are **deployment-specific**

The Problem

- A Service Function that needs to enforce policies **may not have access** to layer-2 subscriber Identifier (MAC@, Line ID, etc.)
  - Difficult to access to a Layer 2 information when the SF is located upstream
- Transport coordinates **are not reliable** for identifying a policy
  - Internal IP address is altered by on-path SFs (translators)
  - IP address/prefix assignment is dynamic
- **How to pass that information to upstream SFs for the sake of policy enforcement while avoiding relying on volatile information?**

The Solution

- **Pass** the "**identification**" data to be consumed by upstream SFs in a dedicated **NEW** context object
  - As part of the NSH header
  - Compliant with Section 4.9 of RFC 7665 (« Sharing metadata »)

- Two context headers are specified:
  - Subscriber Identifier
  - Policy Identifier

  can be included in the same NSH

- Defined as **Opaque** data

  - The structure of the data is deployment-specific

Changes *vs* [draft-sarikaya-sfc-hostid-serviceheader](#)

- **Address the comments** raised during the call for adoption
- **Simplify** the design by focusing on two key TLVs (subscriber and policy)
- **Abandon** defining a structure for the identifiers
- **Remove** all use cases and slice-related metadata
- Almost a complete re-write!

What's Next?

- -01 is stable enough and addresses the comments received so far

- Consider a call for adoption