draft-ietf-mpls-sfc
Discussion of Open Issues

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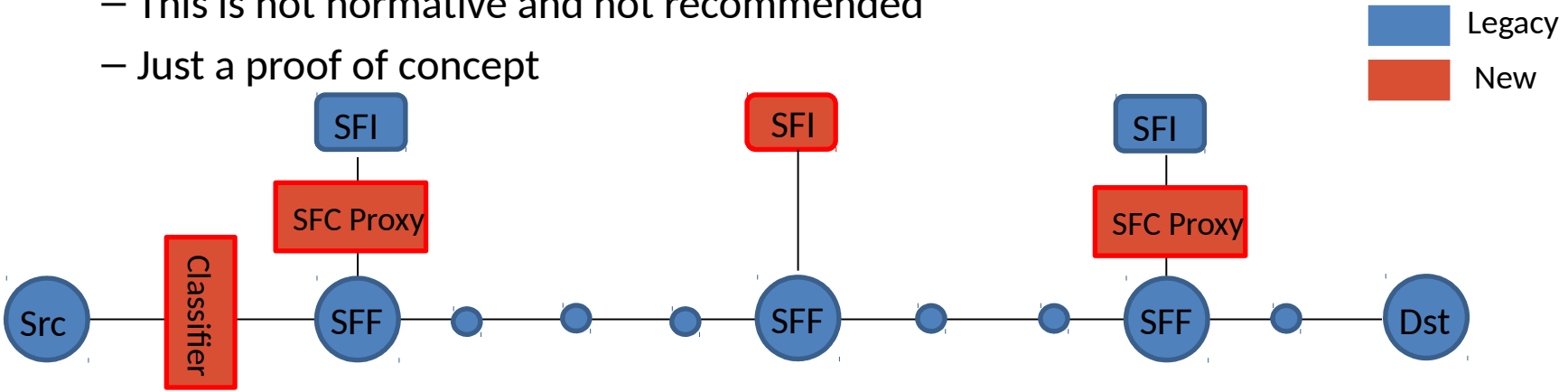
(for the authors)

Several Points were Raised On List

- Purpose today is to:
  - Show changes made to address these points
  - Allow discussion (if you want)
  - Change resolutions (if necessary)
- The points were (see next slides):
  - Why have this technology?
    - Is a brown-field MPLS/SFC deployment realistic?
  - What are the use cases?
  - Resolve the conflict/overlap with SR-MPLS/SFC

Brownfield MPLS/SFC

- Get SFC function deployed in today's MPLS networks
  - NSH-unaware SFFs
  - Not an end goal : just a migration strategy
    - Not competing with NSH
- Added clarifications in Abstract and Introduction
- Added Section 14 to describe a way this could be achieved
  - This is not normative and not recommended
  - Just a proof of concept



Explain the Use Cases

- How do you use the technology?
- New Section 4 identifies 5 cases
  - Label swapping to model the NHS in MPLS labels
  - Fine control of choice of SFI by stacking labels
  - Hierarchical SFC by modelling nested NSHs with a label stack
    - Allows the concatenation of chains
  - Concatenation of “Micro-Chains”
    - Reductio ad absurdum of the previous
  - SR-MPLS
    - Specifically out of scope for this document
    - Reader is directed to draft-xuclad-spring-sr-service-chaining
- This leads to the question about the fourth case
  - (next slide)

Are Micro-Chains Actually SR-MPLS?

- *The MPLS WG had never discussed "Label Stacking" in a draft (never mind an RFC) prior to the introduction of Segment Routing*
  - *Using the label stack as a method to do source routing via only popping labels, with no label swapping along the path*
    - Let's not have this debate?
    - I'm not an archivist, but hierarchical LSPs, PW labels, VPN labels, PHP, pop-and-go …
- AFAICS micro-chains are a consequence of supporting hierarchical SFC
- Possible ways around this
  - Remove micro-chain discussion (delete section 4.4)
    - The function is still logically available, but just not explicitly highlighted
  - Explicitly forbid micro-chains
    - Where do you draw the line? Allow two-hop chains but not one-hop chains?
    - How would you police it?
    - Does it mean you have to forbid hierarchical SFC?
  - Add text to point single-hop micro-chains to SR-MPLS
  - Accept that SR-MPLS is not only a data plane but requires a control plane, and leave the text as is

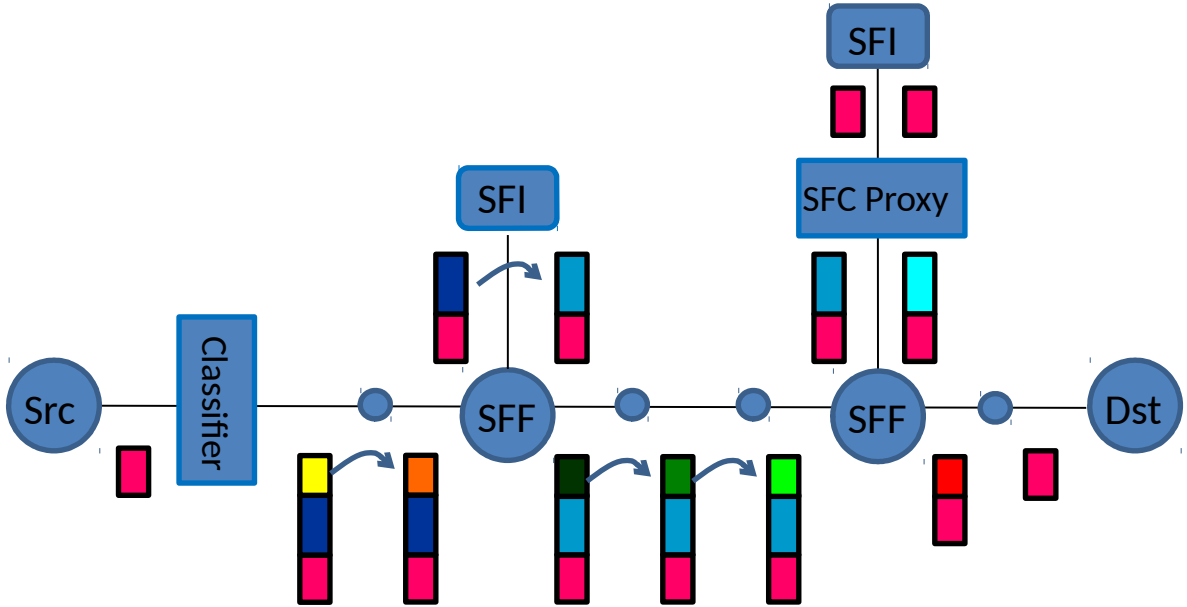
What now?

- Discuss and close off these issues
  - Preferably in a way that means we don’t keep reopening the discussions
- Raise new issues and editorials
  - Business as usual
- Move on to completion
  - Business as usual

Backup slides : Use cases

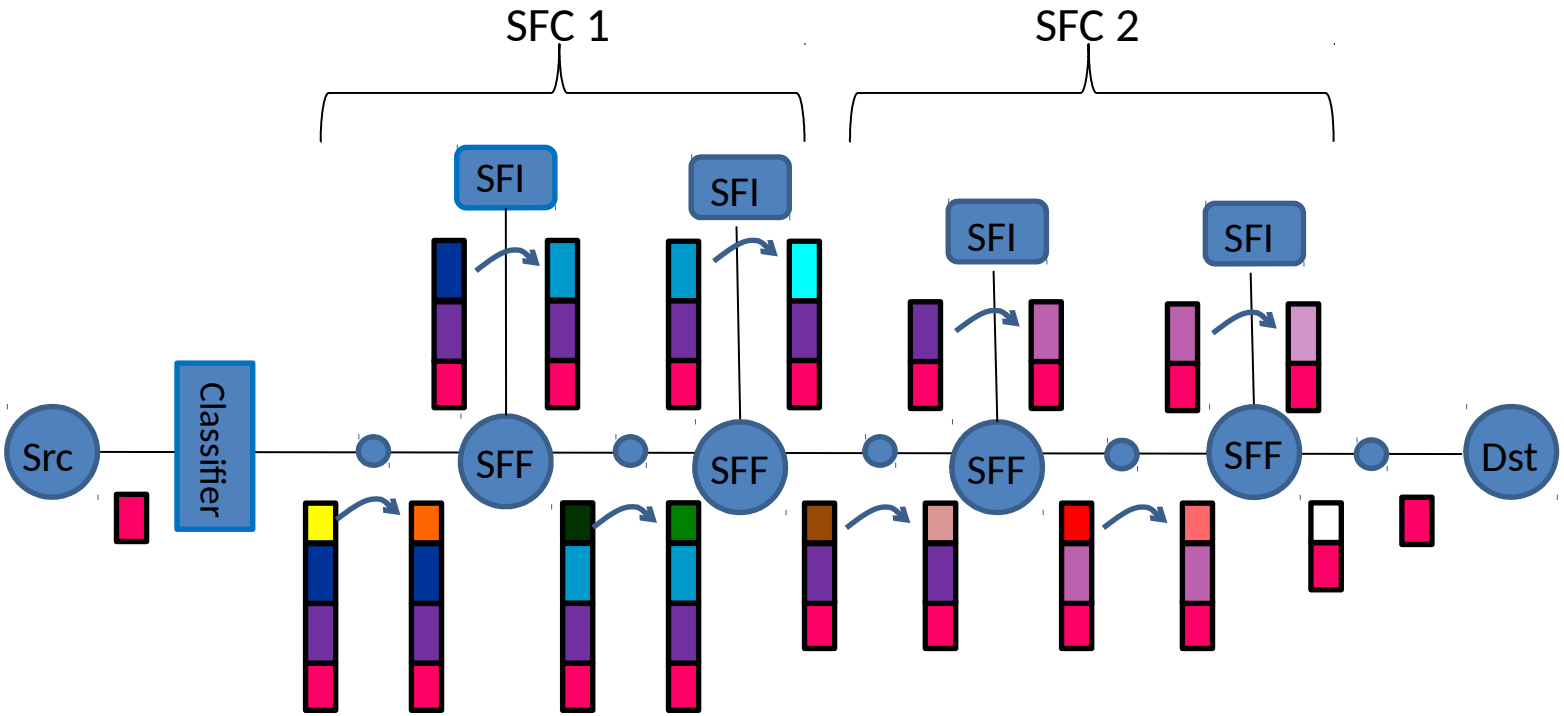
Swapping Use Case

Tunnel Labels
SFC Context Label = SPI
Service Function Label = SI
Payload



Concatenated SFCs

- Top labels for first SFC
- When the SFC ends, the labels for the next SFC are uncovered



Fine Control of SFI

- There may be multiple SFIs of the same type at an SFF
  - Choice may be load balancing
- Use concatenated SFCs to achieve control of choice of SFIs
  - Second stack entry allows Classifier to direct choice