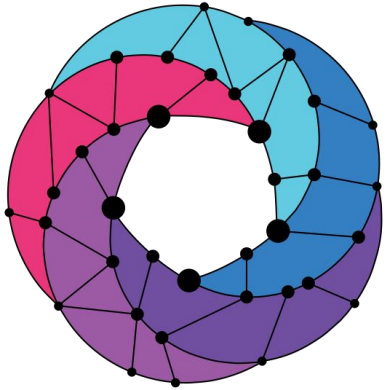

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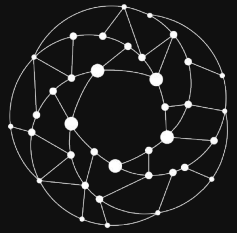
OSM Hackfest – Session 9
Service Function Chaining

Eduardo Sousa (Whitestack)

ETSI



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What is
Service Function Chaining?

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SFC Status in OSM

- Available since OSM Release 3
- SFC only available using:
  Openstack Queens (or higher) with Networking-SFC
- Only supports Asymmetrical Chains
- SFC Encapsulation using Network Service Headers (NSH)
- Traffic classification based in the following fields:

IP Protocol

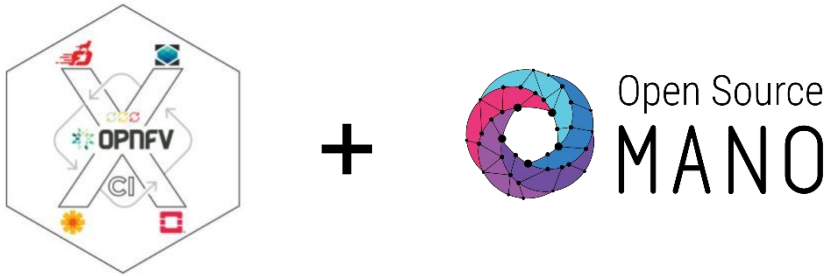
Source IP Address — Destination IP Address

Source Port — Destination Port

What is OPNFV XCI?

OPNFV XCI (Cross Community Integration) is an initiative within OPNFV that **focuses on master branches** in order to:

- **shorten the time** it takes to introduce new features
- make it **easier to identify and fix bugs**
- **ease** the effort to develop, integrate, and test the reference platform
- establish **additional feedback loops** within OPNFV, towards the users and between the communities OPNFV works with
- **increase the visibility** regarding the state of things at all times



OPNFV XCI Integration

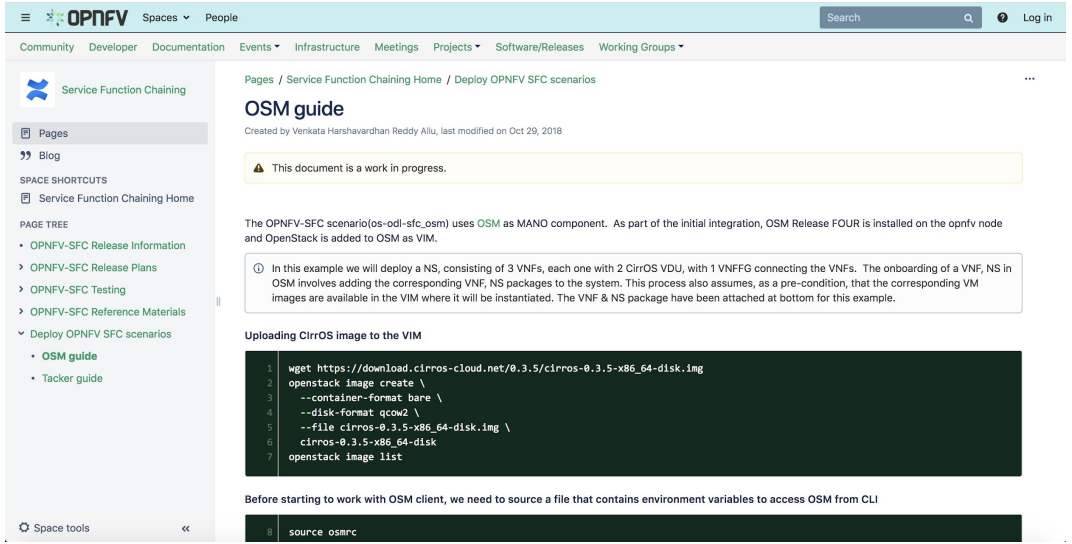
- **OPNFV has integrated OSM installation into their pipeline.**

- The first advanced use case they want to implement is Service Function Chaining (previously done with Tacker)

  → **Basic SFC has been integrated as of 31/Oct/2018**

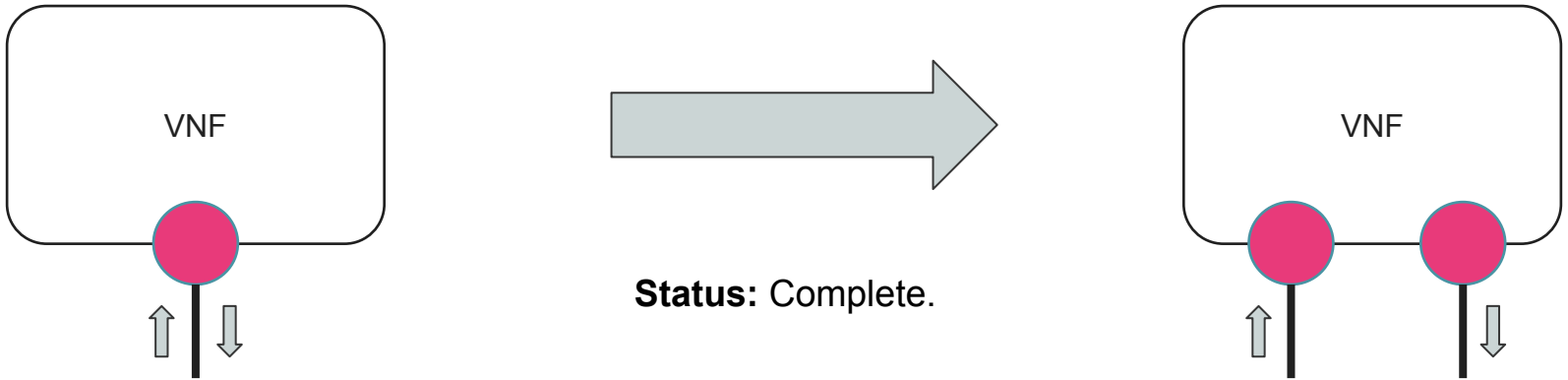
- Next step is to evolve OSM SFC features to achieve more use cases.

https://wiki.opnfv.org/display/sfc/OSM+guide



Separate ingress and egress ports

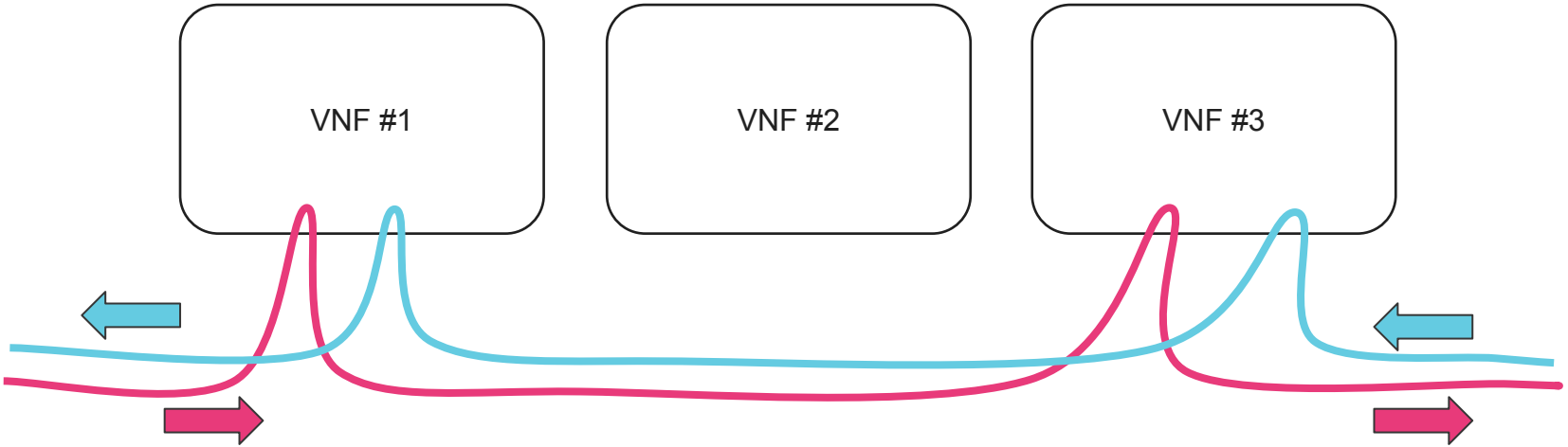
Modifying the Information Model and Resource Orchestrator



Status: Complete.

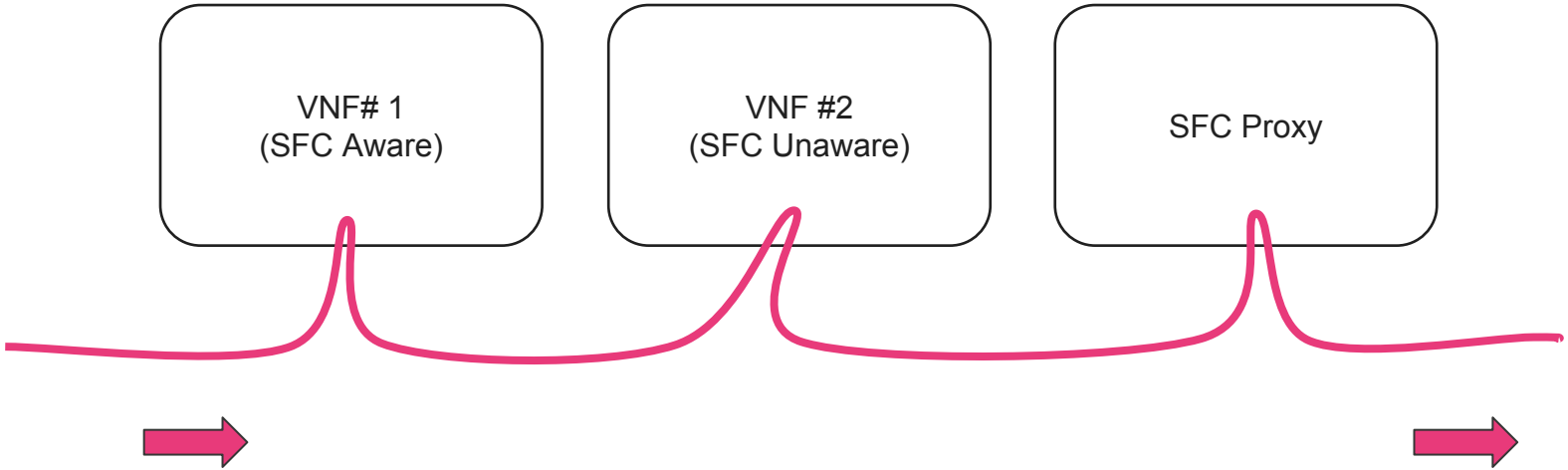
Symmetrical/Asymmetrical Chains

Currently only Asymmetrical Chains are supported.
Status: In development.



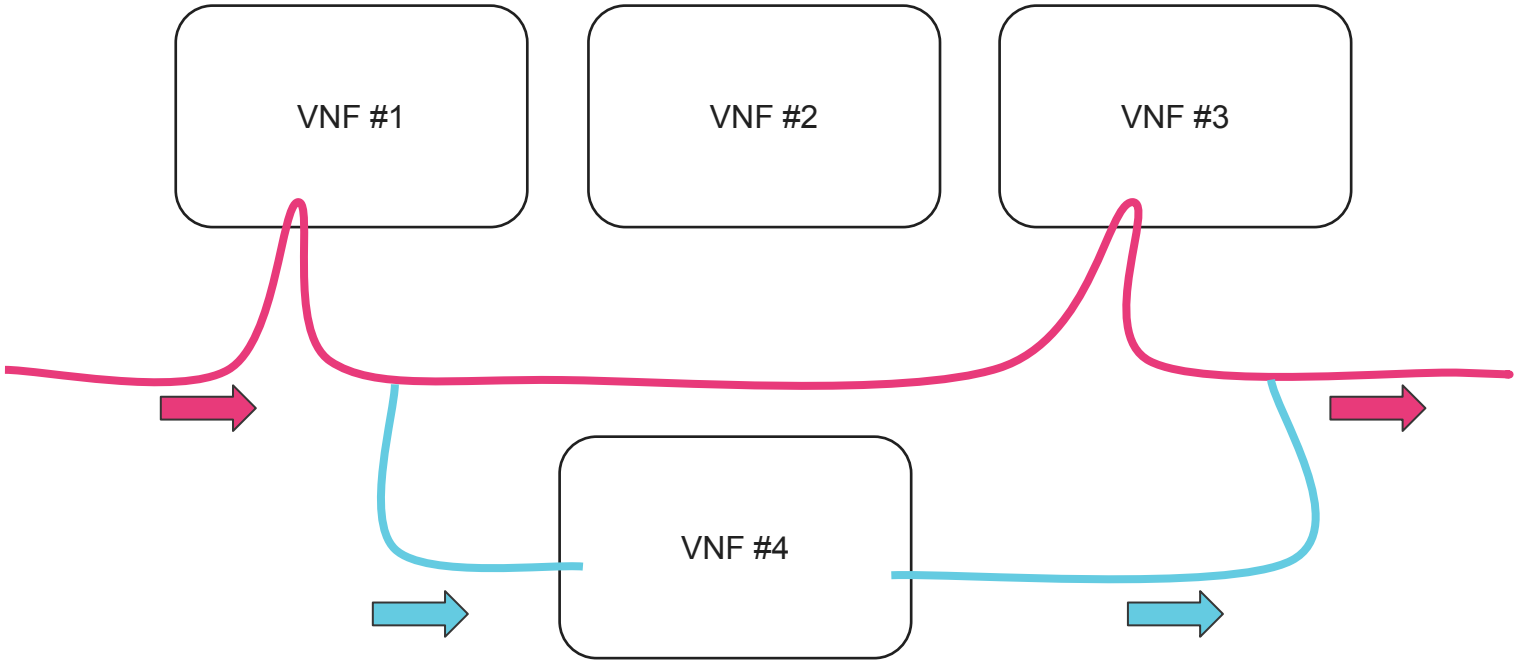
Non-Transparent Service Functions

Currently not supported.
Status: Research ongoing.



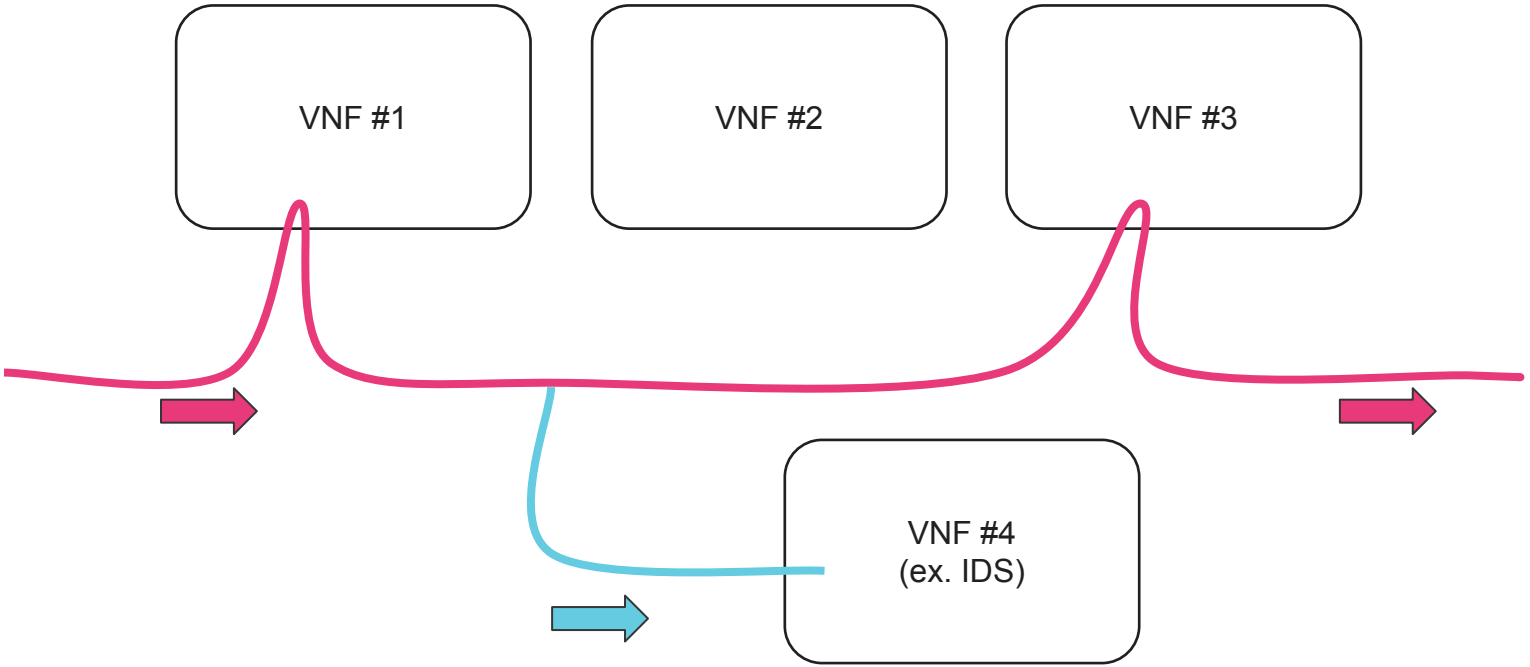
Branching and Joining

Currently not supported.
Status: Research ongoing.



Service Function Tap

Currently not supported.
Status: Research ongoing.

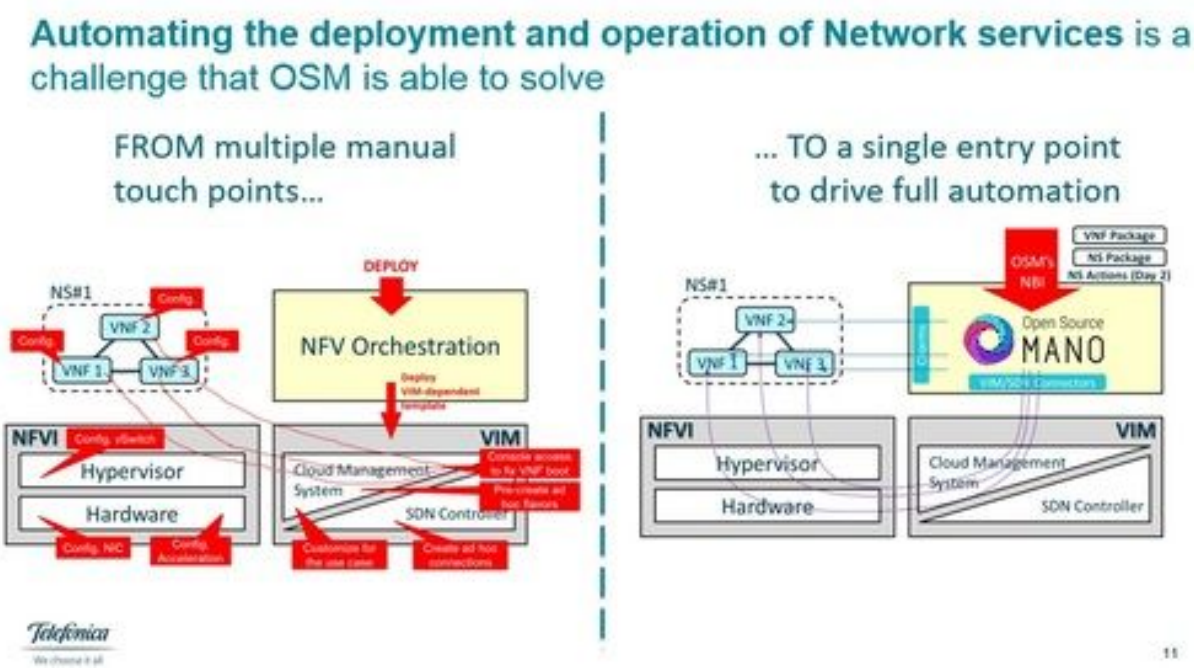


SFC Management API (1)

«The current service function deployment models are relatively static, coupled to network topology and physical resources, greatly reducing or eliminating the ability of an operator to introduce new services or dynamically create service function chains.»

IETF - RFC 7665 - Service Function Chaining (SFC) Architecture

SFC Management API (2)



SFC Management API (3)

Introducing an API to:

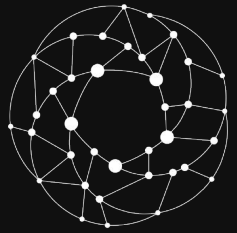
- Manage Rendered Service Paths (RSPs)
- Manage Flow Classifiers

Aligned with SOL005

Main problems:

- Loop detection and avoidance
- Scaling operations

Status: In development.



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Hands-on

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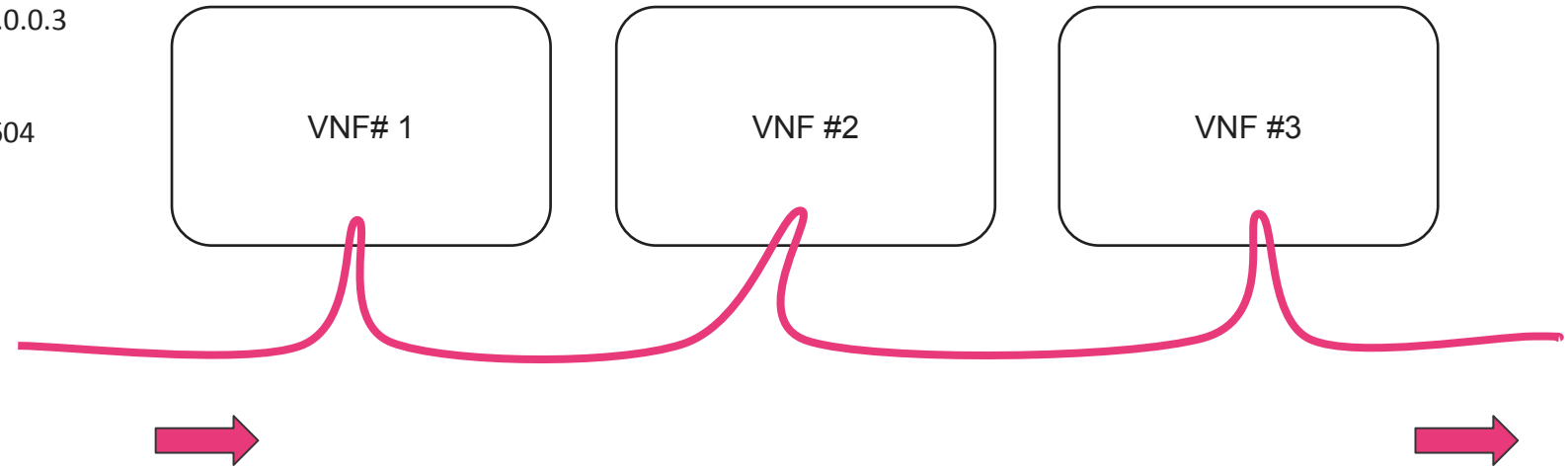
Demo: Original Network Service

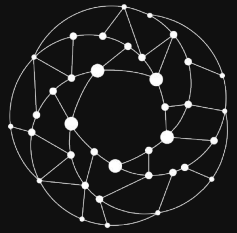
Flow Classifier #1:

- IP Proto: TCP
- Src IP: 10.0.0.3

Image:

- ubuntu1604





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The End

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