

VF-C Casablanca Highlights and Dublin Planning

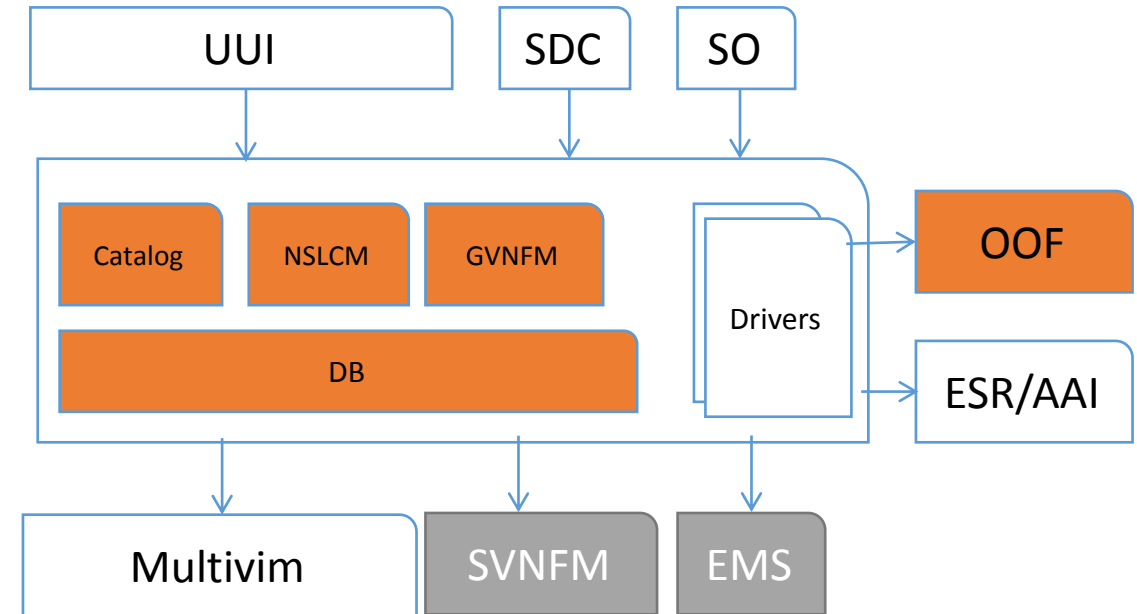
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Jan, 2019

Part1 VF-C Casablanca Highlights

VF-C Highlights

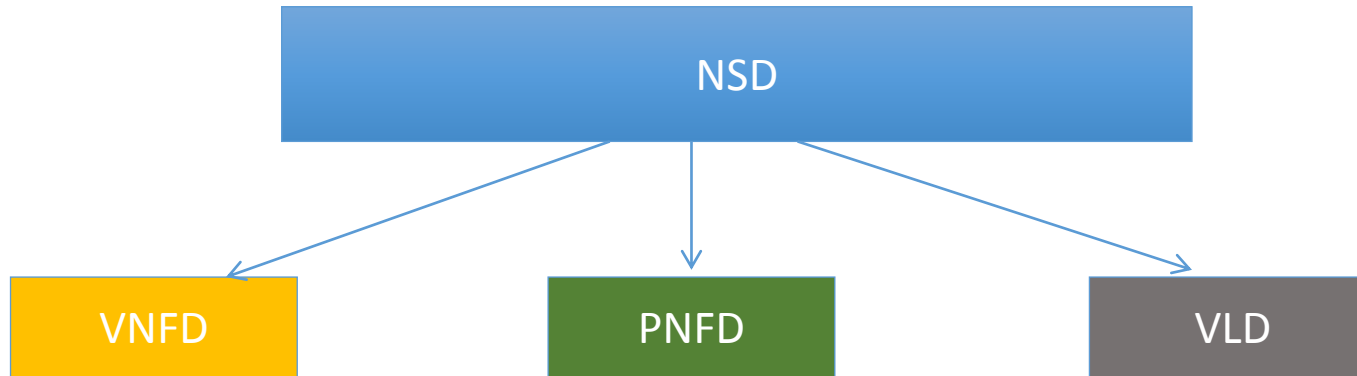
- NS Orchestration Supports PNF
 - NSLCM supports NSD, composed of VNF, PNF, and VL
 - Catalog supports SOL001 PNFD and NSD DM
- SOL003 Alignment
 - GVNFM support SOL003 API
 - Catalog support SOL003 related API
- Standalone DB Microservice
- Hardware Platform Awareness (HPA) Support
 - integrate with OOF, and VF-C sending HPA homing requests to OOF and OOF return homing decision to VF-C.
 - VF-C can parse R2+ TOSCA Model which includes HPA feature.



Note1: components listed here don't contain all VF-C components, only used to highlight Casablanca work .

Mixed Orchestration of VNF and PNF

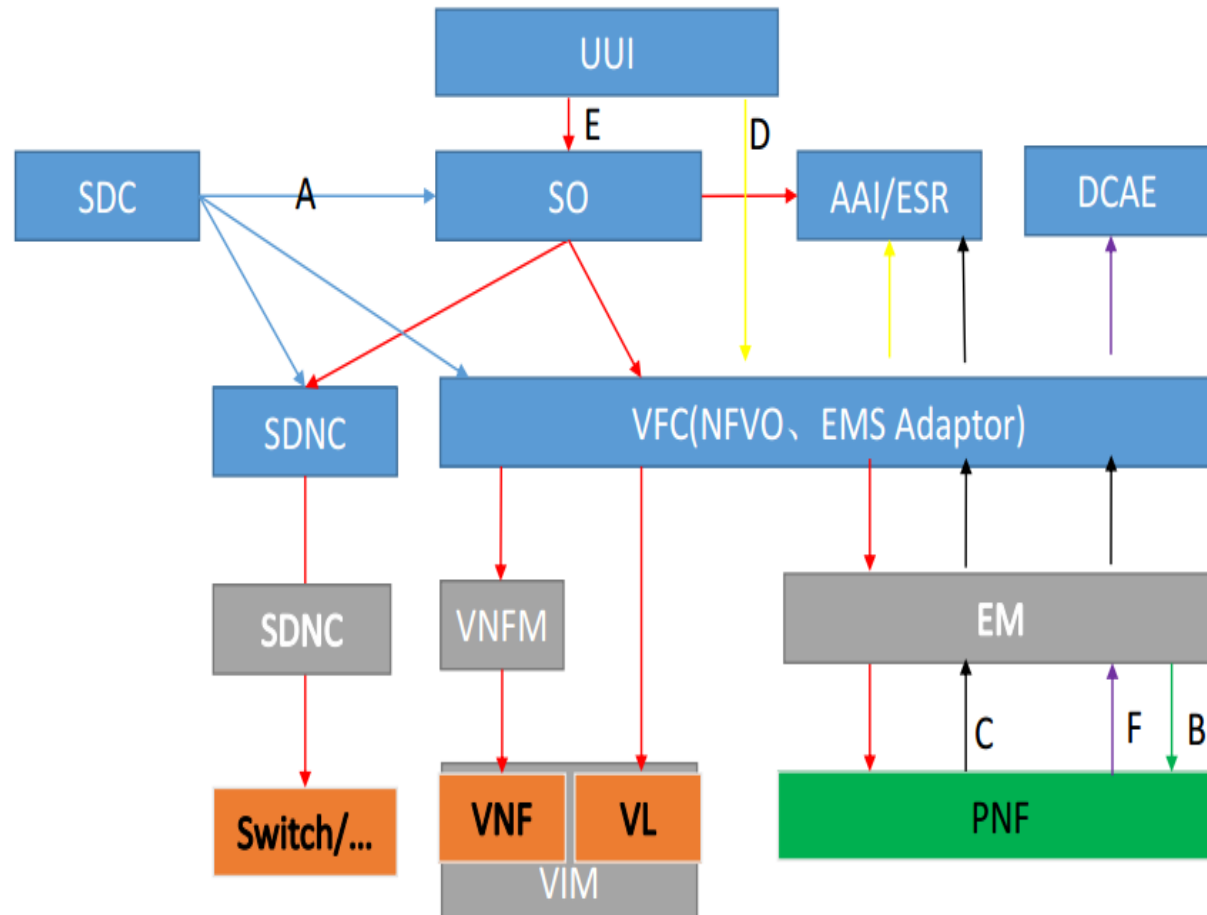
NS Orchestration Supports PNF



- NSLCM supports NSD, composed of VNF, PNF, and VL
- Catalog supports PNFD and updates NSD DM parse

Mixed Orchestration of VNF and PNF

5G use case SO – VFC – EMS workflow



A: Model design & dispatch

B: EMS deploys PNF

C: PNF register to EM
EMS register to VFC and put into A&AI

D: UII config PNFD parameter

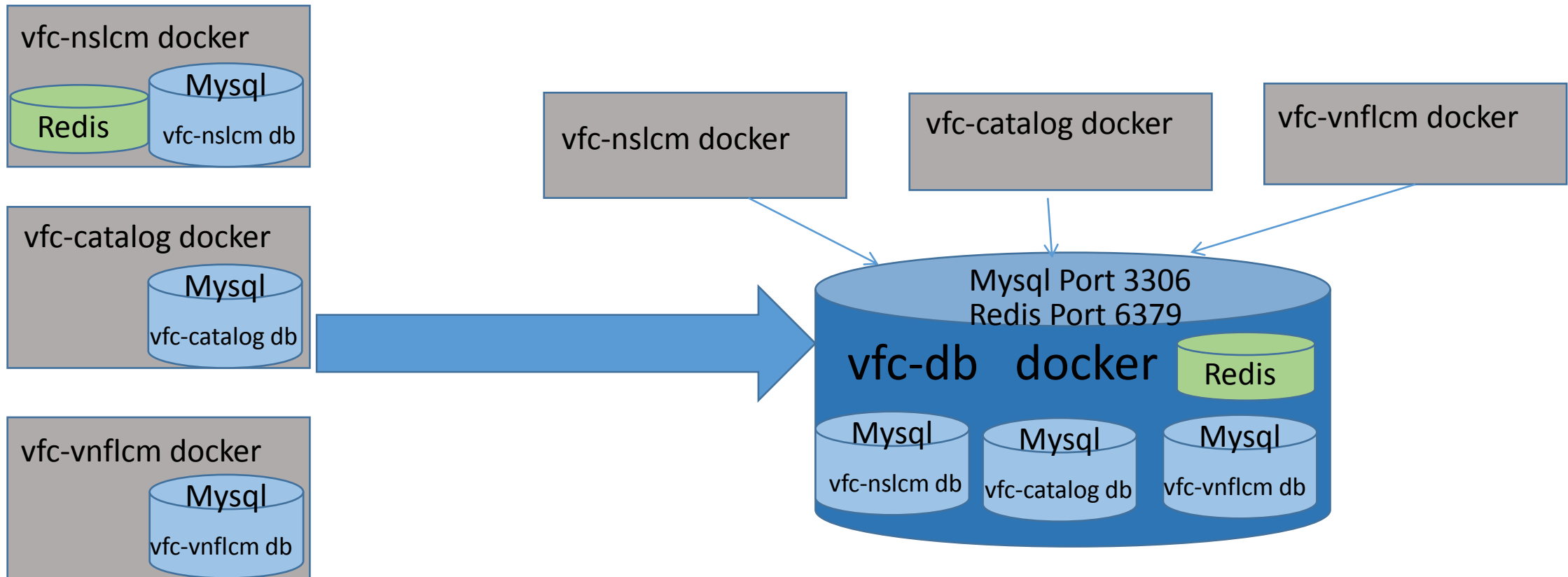
E: UII invoke 5G NS via VFC

VFC decomposes the NS
VFC invokes VNFM to create VNF
VFC invokes EM to init config PNF
VFC invokes Multivim to create VL

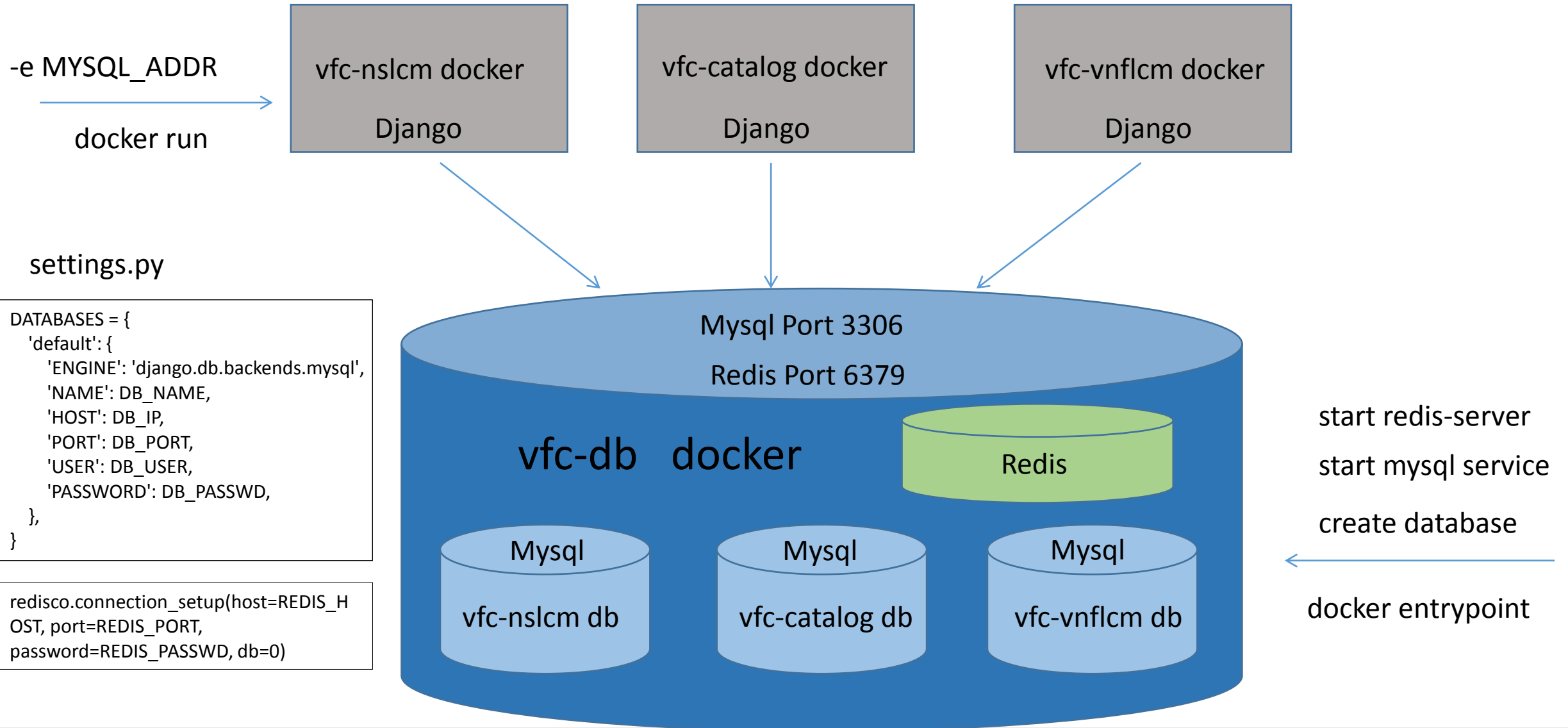
F: PNF report alarm/performance to ONAP

VF-C DB Summary

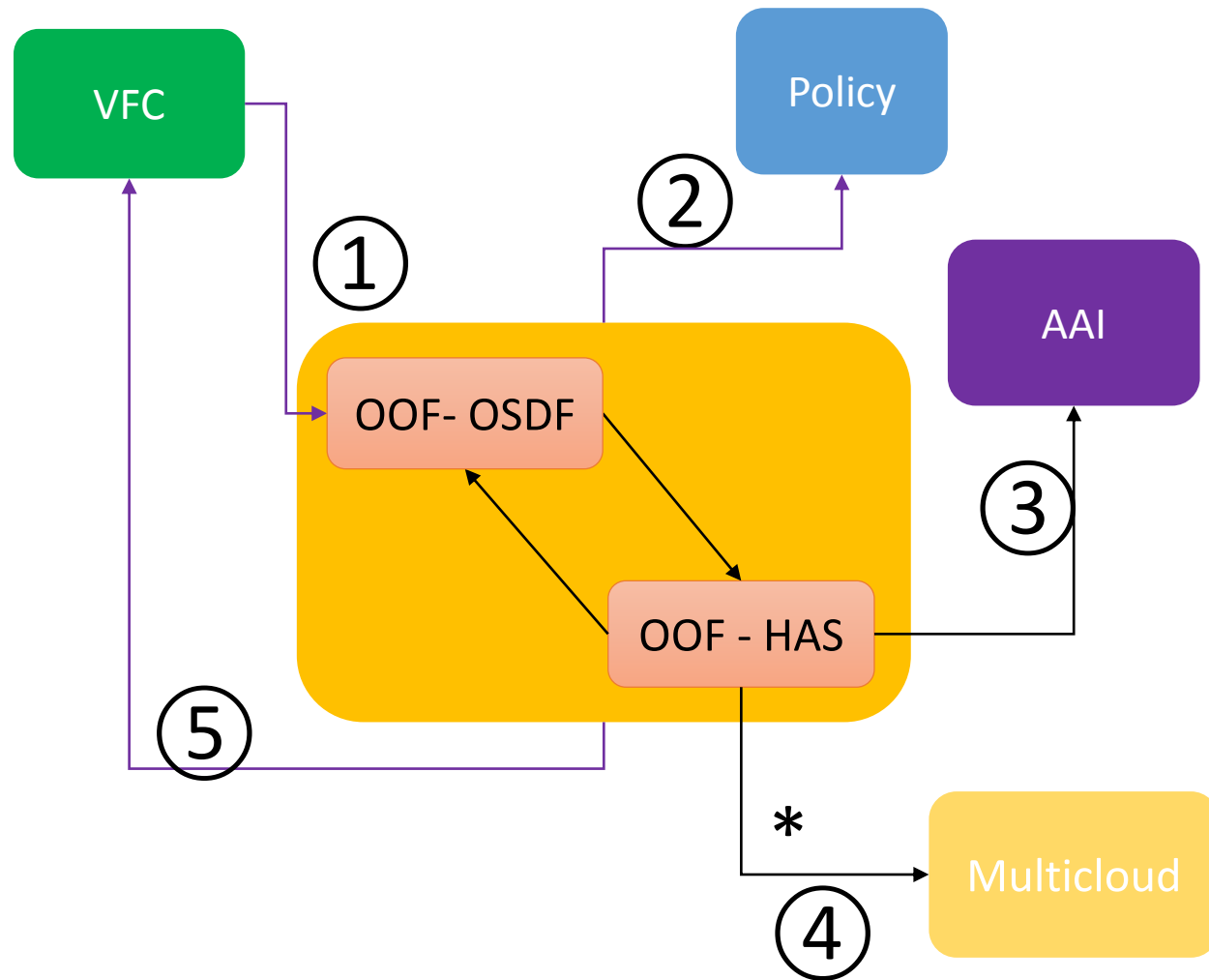
Split existing DB in each component into one standalone DB microservice



VF-C DB Summary



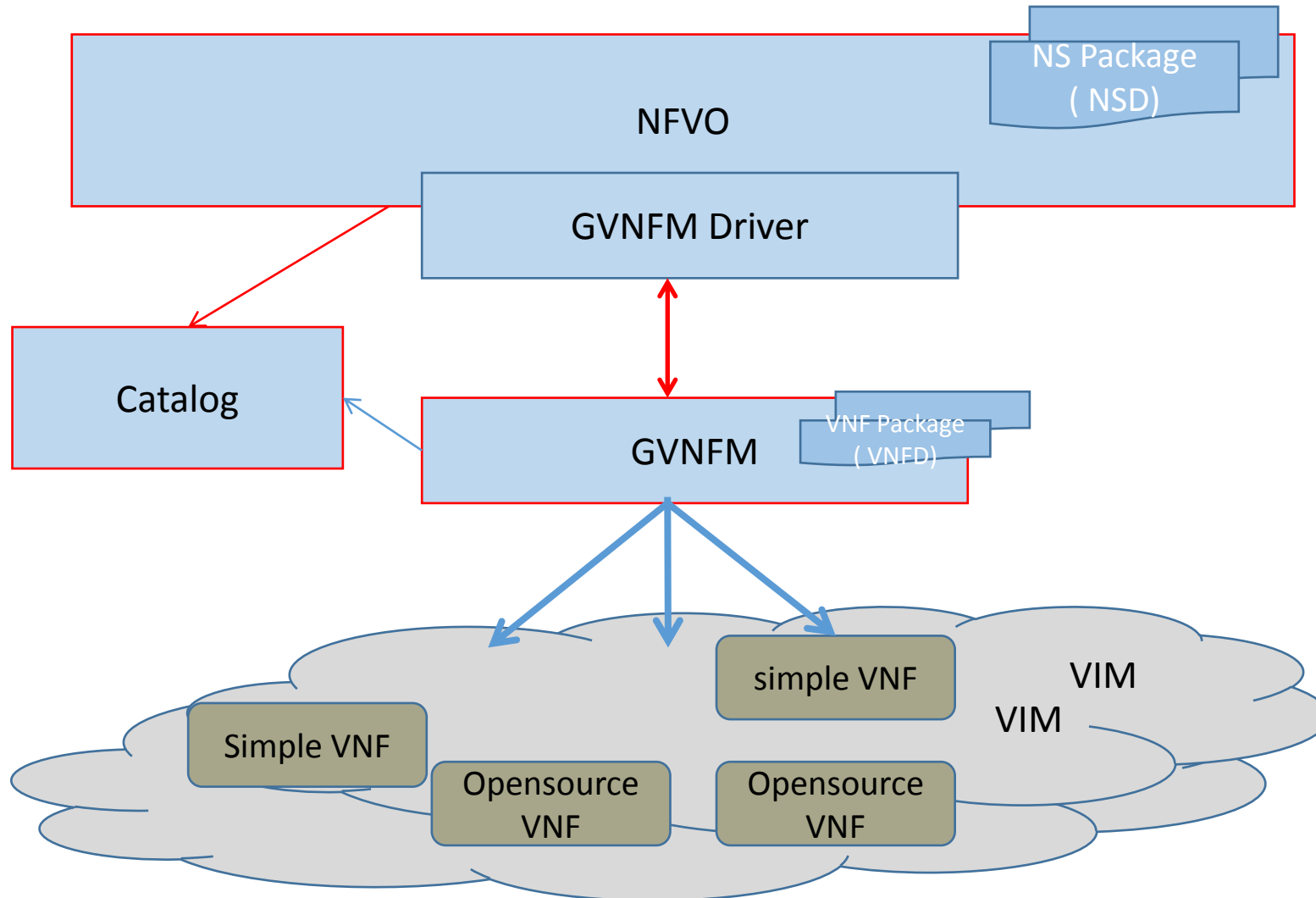
Homing Decision Between VF-C and OOF



- ① VFC sends out homing request to OOF(OSDF) containing resource info
- ② OOF(OSDF) pulls all the related homing constraints from Policy
- ③ OOF(HAS) check AAI database to pull region(flavor) information
- ④ OOF(HAS) communicate with Multi-cloud to check cloud capacity (vims which fulfill the requirements)
- ⑤ OOF(OSDF) returns homing allocation solution to VFC

SOL003 Alignment

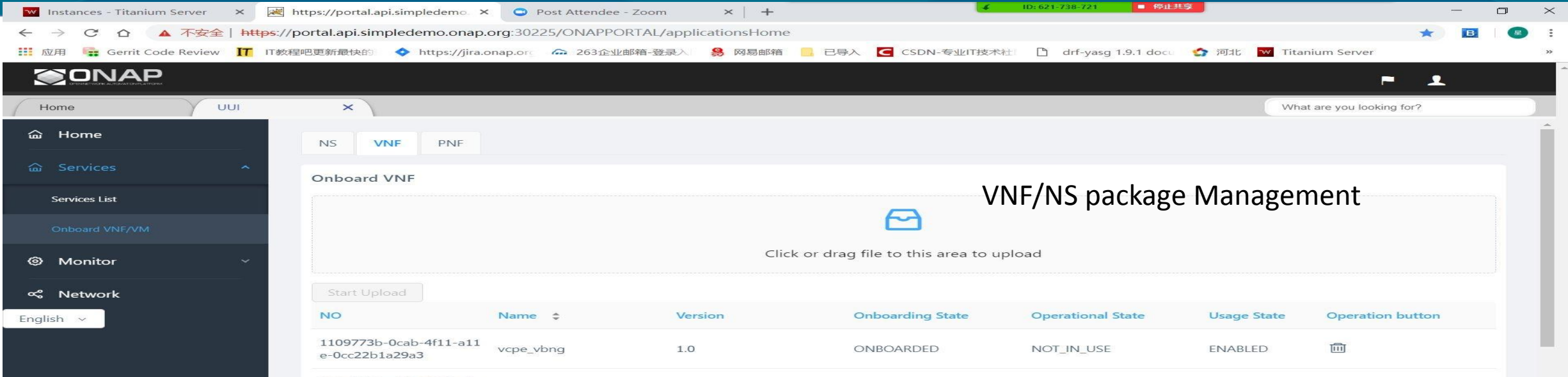
SOL 003 Alignment



- GVNFM support SOL003 API, including Create/Instantiate/Operate/Terminate/Delete/Query VNF Instance VNF LCM Operation subscriptions and notification.

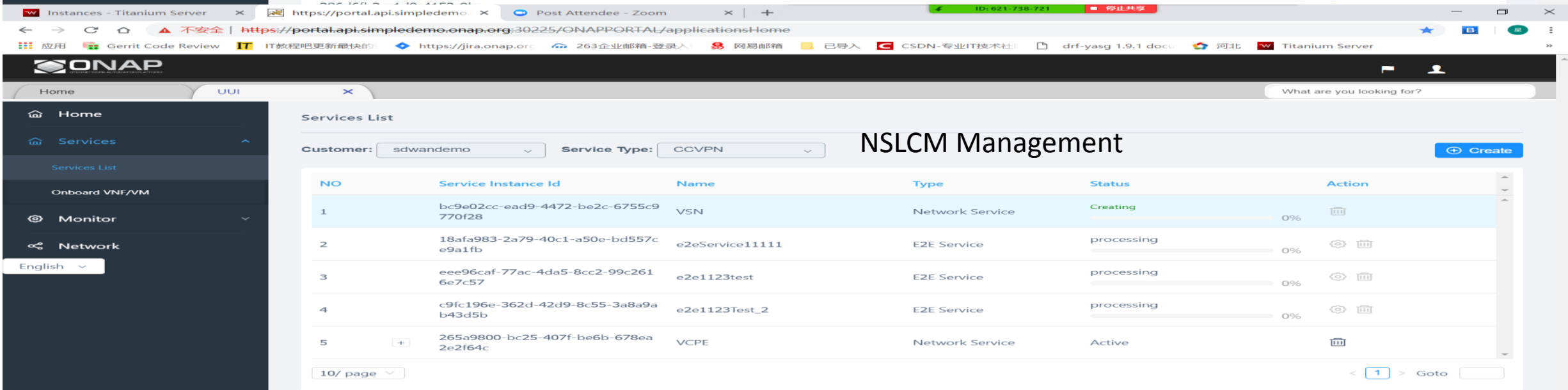
- Catalog support SOL003 related API, including Upload/Download VNF Package content Create/Delete/Get VNF Package

NSLCM Supporting via UUI



The screenshot shows the 'Onboard VNF' page in the ONAP UUI. The page title is 'VNF/NS package Management'. It features a file upload area with a folder icon and the text 'Click or drag file to this area to upload'. Below the upload area is a table with the following data:

NO	Name	Version	Onboarding State	Operational State	Usage State	Operation button
1109773b-0cab-4f11-a11e-0cc22b1a29a3	vcpe_vbng	1.0	ONBOARDED	NOT_IN_USE	ENABLED	

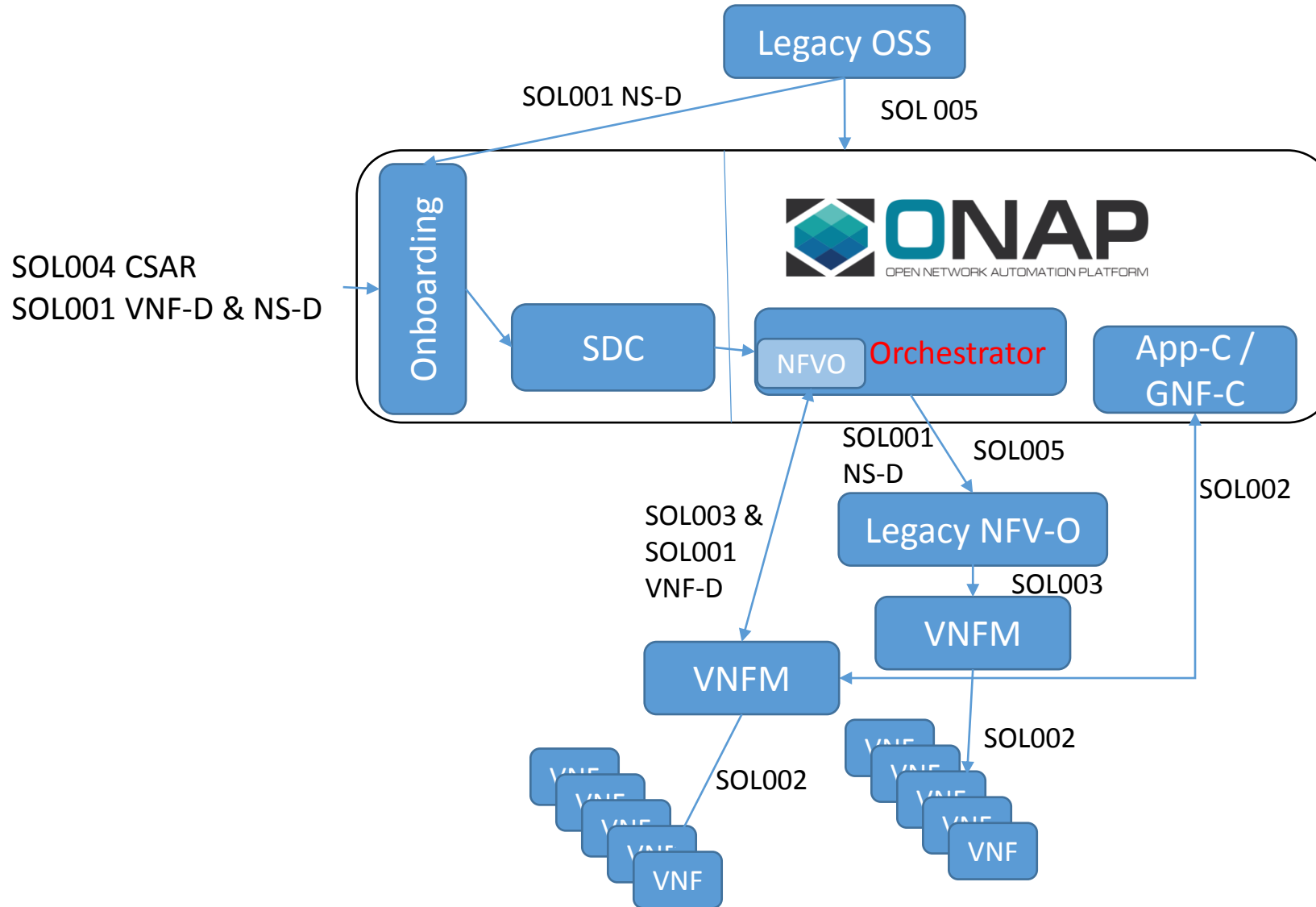


The screenshot shows the 'Services List' page in the ONAP UUI. The page title is 'NSLCM Management'. It features a 'Customer' dropdown set to 'sdwandemo' and a 'Service Type' dropdown set to 'CCVPN'. A 'Create' button is visible in the top right. Below the dropdowns is a table with the following data:

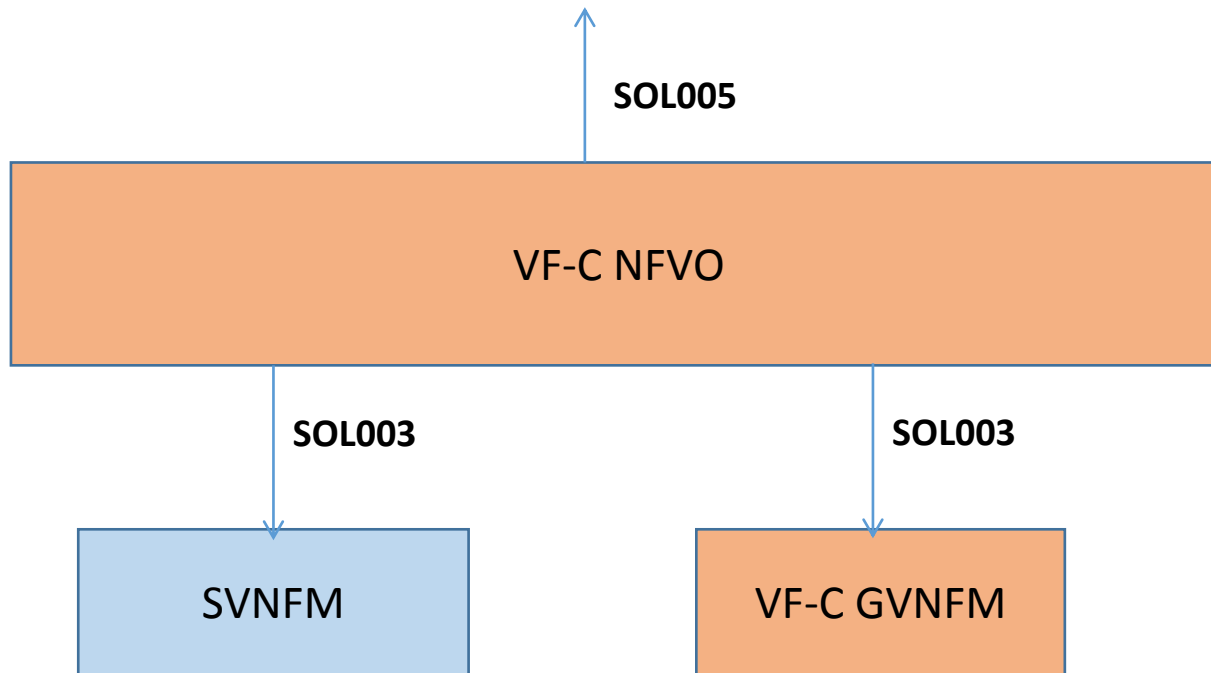
NO	Service Instance Id	Name	Type	Status	Action
1	bc9e02cc-ead9-4472-be2c-6755c9770f28	VSN	Network Service	Creating 0%	
2	18afa983-2a79-40c1-a50e-bd557ce9a1fb	e2eService11111	E2E Service	processing 0%	
3	eee96caf-77ac-4da5-8cc2-99c2616e7c57	e2e1123test	E2E Service	processing 0%	
4	c9fc196e-362d-42d9-8c55-3a8a9ab43d5b	e2e1123Test_2	E2E Service	processing 0%	
5	265a9800-bc25-407f-be6b-678ea2e2f64c	VCPE	Network Service	Active	

Part2 VF-C Dublin Planning

ETSI Alignment

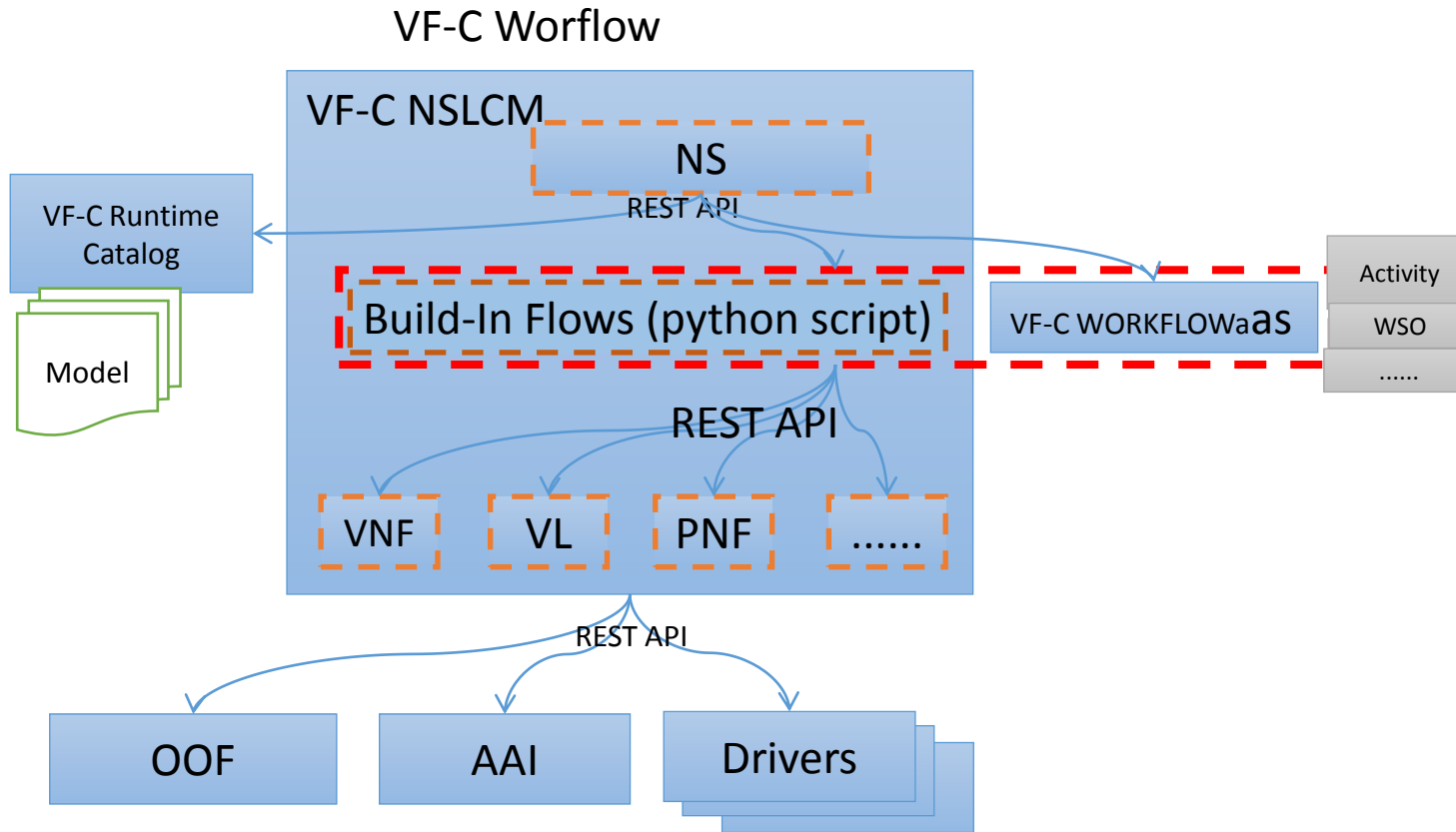


ETSI Alignment Requirements



Serial	ETSI Alignment Requirements
1	NFVO directly exposes SOL005 interface to OSS/BSS
2	NFVO is connected to SVNFM or GVNFM through SOL003 interface.

WorkFlow Optimization



VF-C workflow has different options, the build-in workflow has higher execution efficiency and VF-C also provides workflow microservice that can integrate with different workflow engines. This design allows VF-C to be decoupled from specific workflow engines and more flexible.

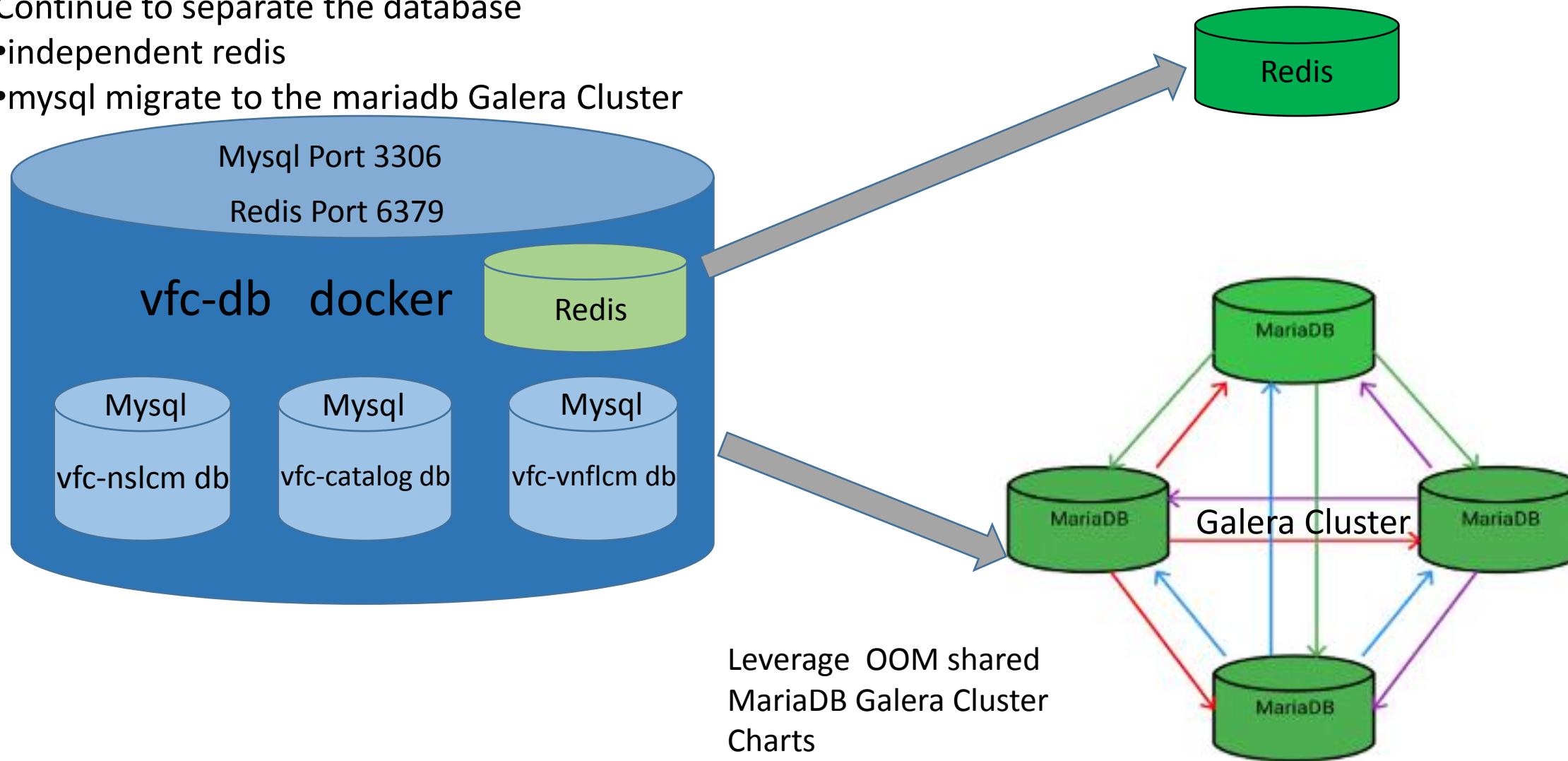
The built-in workflow is executed by default in current VF-C code.

In Dublin release, we would like to perform different workflow branches through flexible configuration. And increase the capabilities that workflow microservices can provide, such as monitoring ...

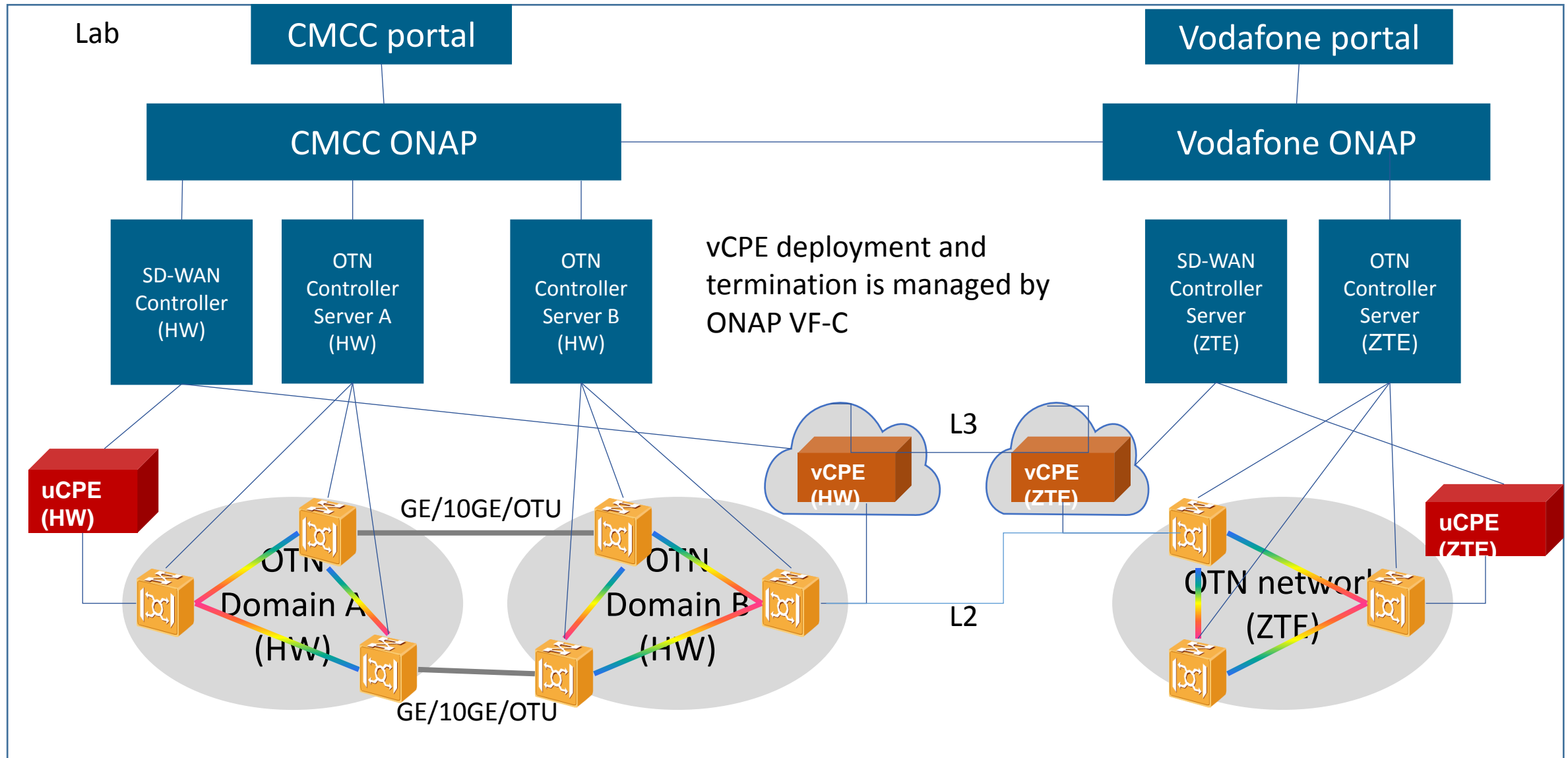
DB HA Support

Continue to separate the database

- independent redis
- mysql migrate to the mariadb Galera Cluster

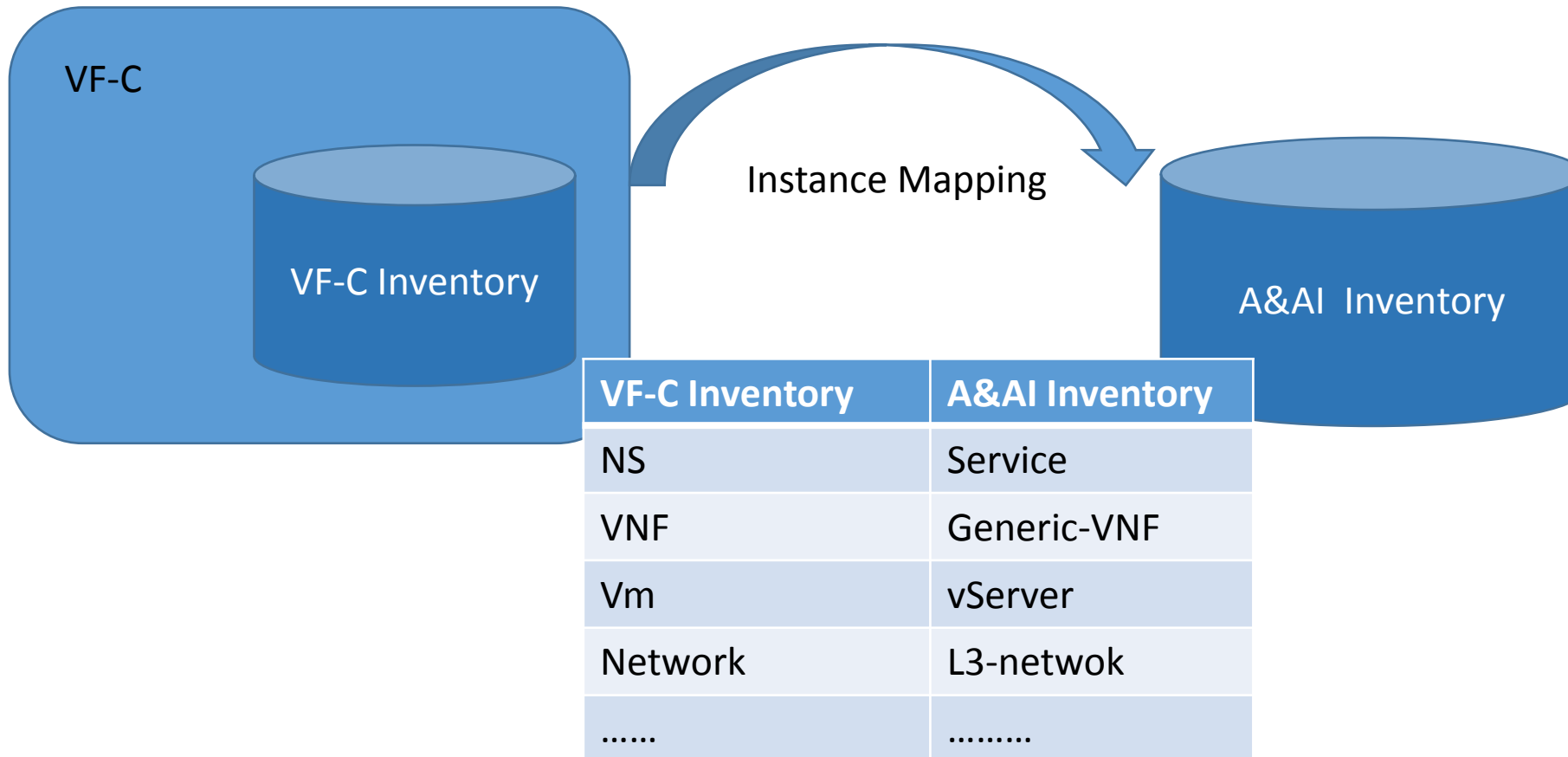


CCVPN Support



Inventory Mapping

1. A&AI will extend service instance to support NS instance information in Dublin release
2. VF-C need to synch the NS information to A&AI service Instance



External Cooperation—Generic Tosca Parser

VF-C is participating related analysis and discussion about generic tosca parser.

Project	Implementation language	Parser used
SO	Java	SDC Tosca Parser
VF-C	Python	NFV Tosca Parser
UUI	Java	SDC Tosca Parser
VNFSDK	Java/Python	NFV Tosca Parser/SDC Tosca Parser
Policy	Java	SDC Tosca Parser
A&AI	Java	SDC Tosca Parser
SDNC	Java	SDC Tosca Parser
VID	Java	SDC Tosca Parser
SDC	Java	SDC Tosca Parser
CLAMP	Java	SDC Tosca Parser
APPC	Java	SDC Tosca Parser

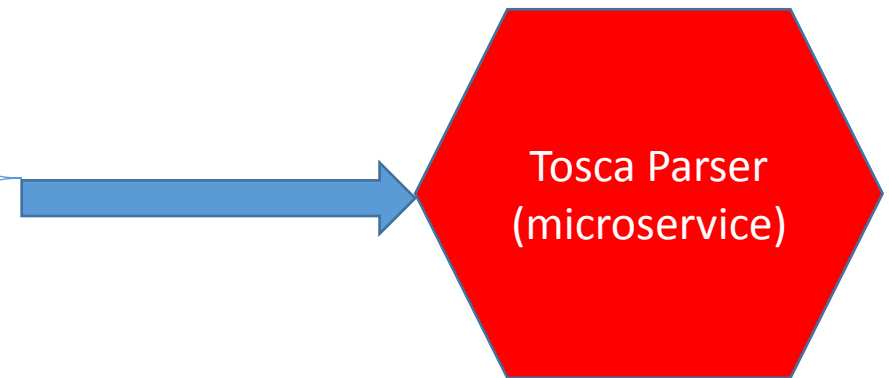
SDC Tosca Parser Lib

NFV Tosca Parser Lib

Other Options

Will continue to participate the follow discussion :

- Parser API requirements collection
- Parser API Design

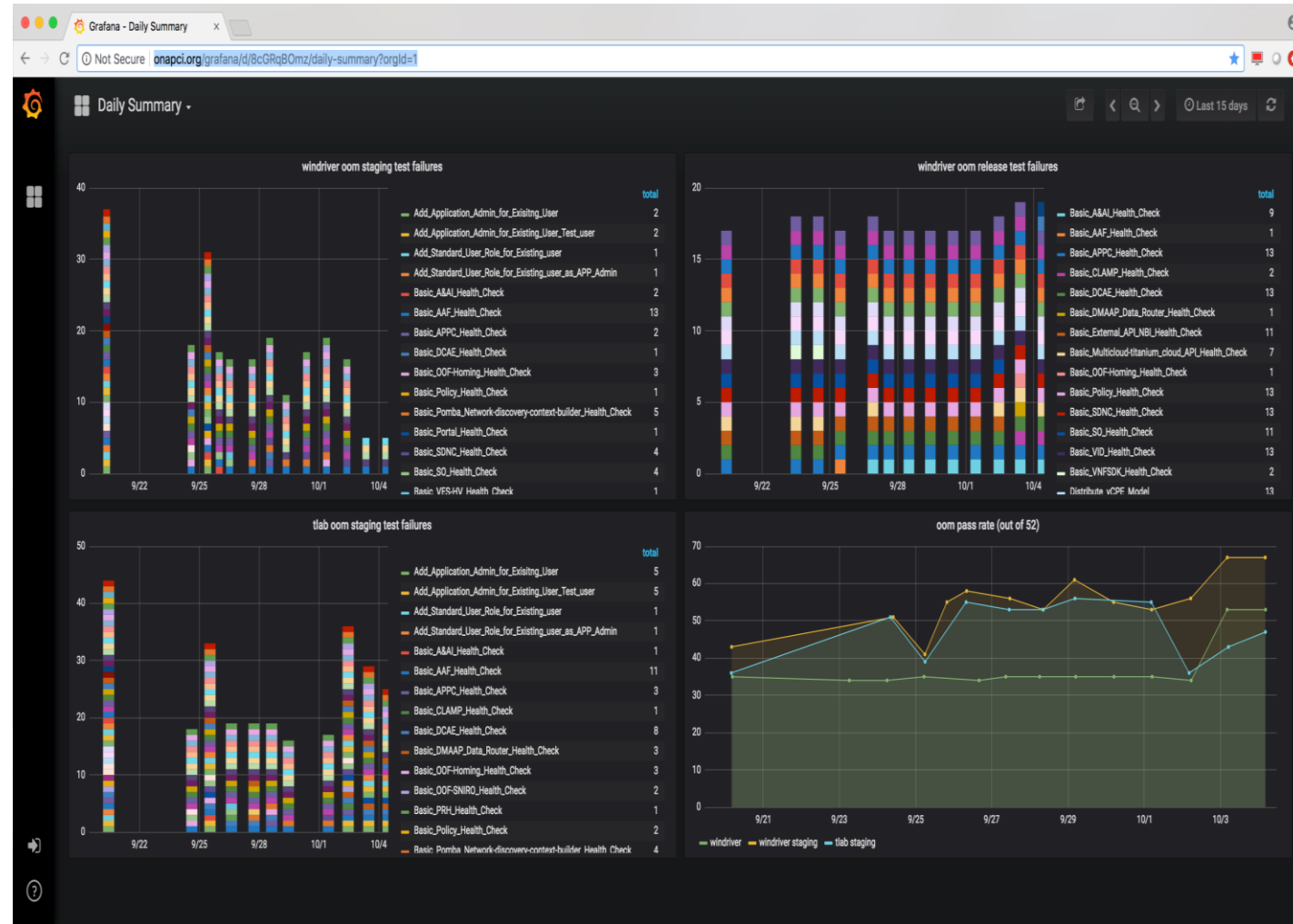


External Cooperation—Integration CI/CD

Current CI/CD with Daily Summary include functional tests + health checks, the functional tests such as:

- ONAP CI.Vnf-Orchestration.Instantiate Virtual DNS
- ONAP CI.Vnf-Orchestration.Instantiate Virtual FirewallCL

All current functional tests only cover heat-based VNF deployment, will plan to add toasca-based VNF deployment functional tests.





ONAP

OPEN NETWORK AUTOMATION PLATFORM

Thanks