

Open Source
MANO

1st OSM VNF Day - Kickoff:
The Importance of VNF Onboarding for NFV Realization

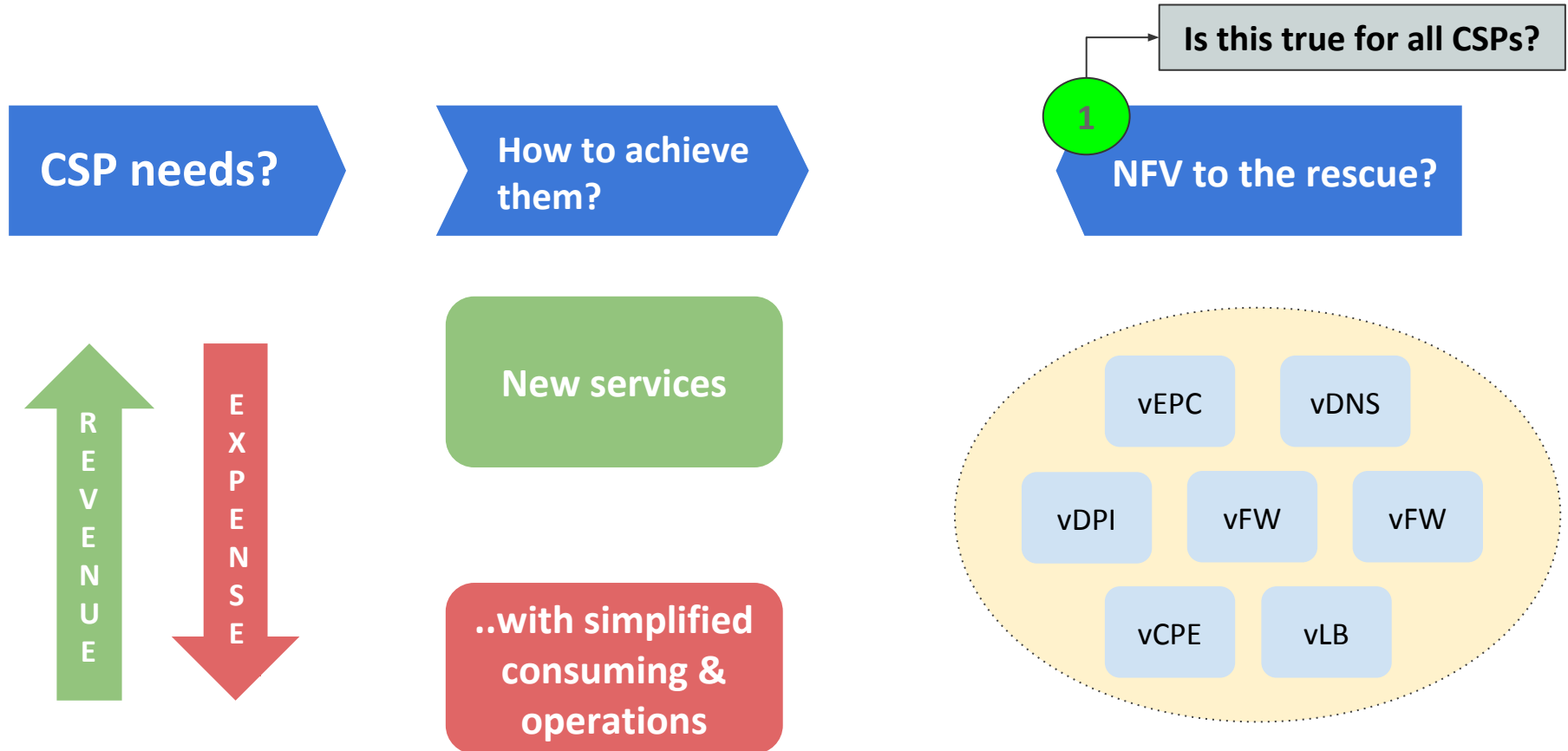
Gianpietro Lavado
OSM VNF Onboarding TF Chair /
Senior Solutions Architect @ Whitestack



Welcome!

Timing	Session	Partner Company	Name	Abstract summary
13:00-13:30	Keynote / Kick-off	Whitestack	Gianpietro Lavado	Keynote: The Importance of VNF Onboarding to NFV Realization
13:30 – 14:00	VNF Day Session #1	Canonical	Marcin Bednarz	Virtualised and Containerised Network Functions in OSM
14:00 – 14:30	VNF Day Session #2	Fortinet	Ali Bidabadi,	With numerous challenges in the area of security VNFs (and VNFs in general), Fortinet has worked to enhance the performance of its security VNFs by taking advantage of cutting-edge technologies.
14:30 – 15:00 including Q&A	VNF Day Session #3	Intel	Intel Network Builders	This session will provide an overview of the Intel® Network Builders University and the value of cutting edge technical training in the network transformation landscape.
14:50 – 15:10	Coffee Break			
15:10 – 15:40	VNF Day Session #4	A10	Saurabh Sureka	Interoperability, performance & business flexibility are the key requirements from VNF's deployed across Multi-Clouds.
15:40 - 16:10	VNF Day Session #5	VMware	Vanessa Little	Are we realizing the promise of NFV?
16:10 - 16:20	Panel Set Up			
16:20 – 17:00	VNF Day Panel	All Presenters		With 5G winds at our backs, it seems like we all need to go faster than ever to virtualize, containerize or even go grounds up cloud-native. In this panel we will explore workloads and deployment types that require different approaches, and looking at each partners own experience at meeting market needs.

Why are we here?



1 Embracing the NFV vision

There are still a couple of challenges perceived by some CSPs, which believe in virtualization, but prefer to rely on vertical “single vendor” deployments.

Do I need a NFV orchestrator at all?

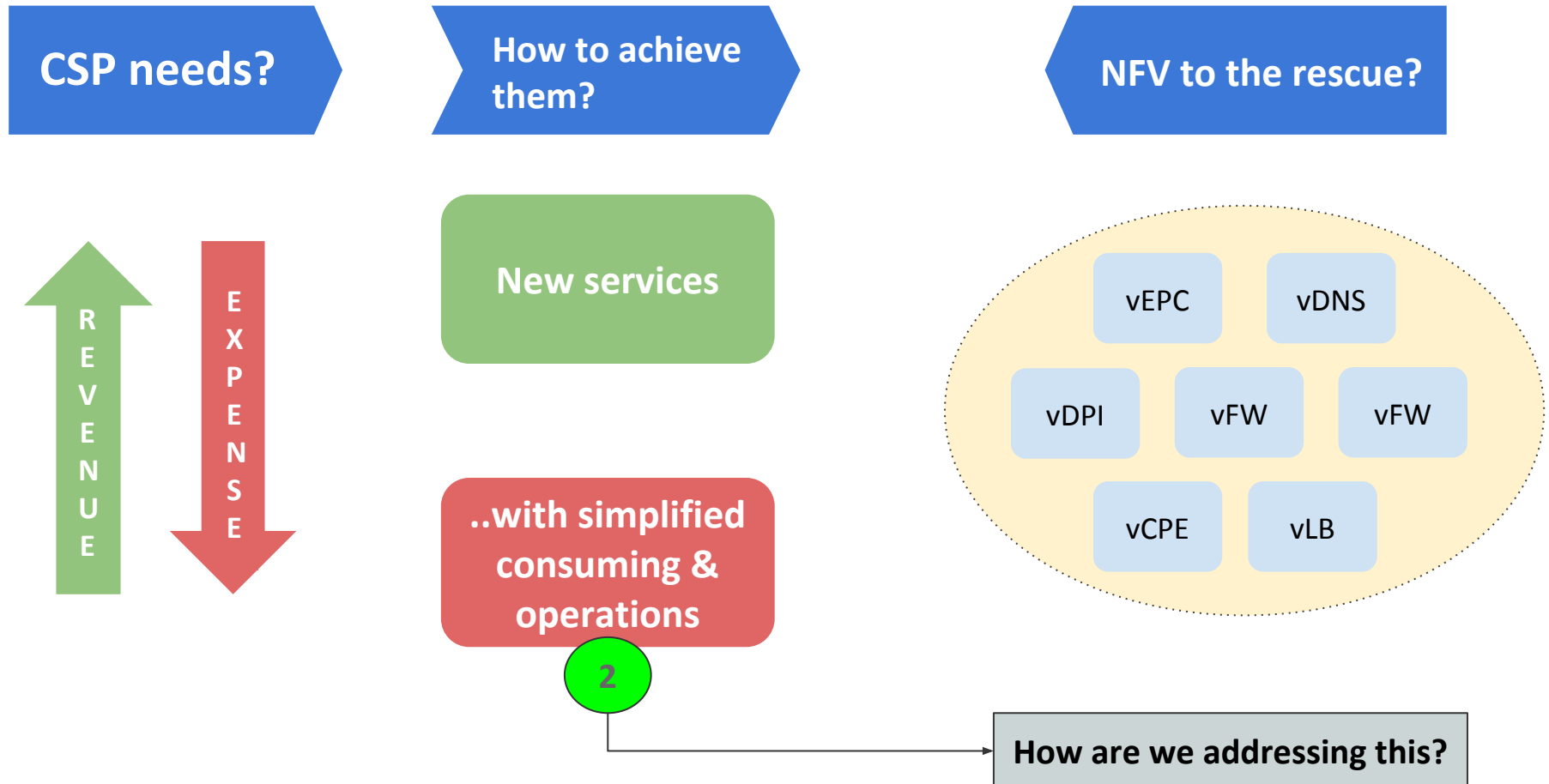
- What’s the value of orchestrating NS / VNFs beyond VMs and container lifecycle management?

Will my NFV MANO be compatible with any VNFs?

- Will automation of configuration, monitoring, scaling, healing, updating, and other operations work with any VNF?

The value of Day1/2 automation of multiple VNFs, from a generic NFV MANO platform, is yet to be widely demonstrated!

Why are we here?



2 VNF Operations Simplification

Both VNF and MANO vendors have an important role here!

VNF Vendors need to address:

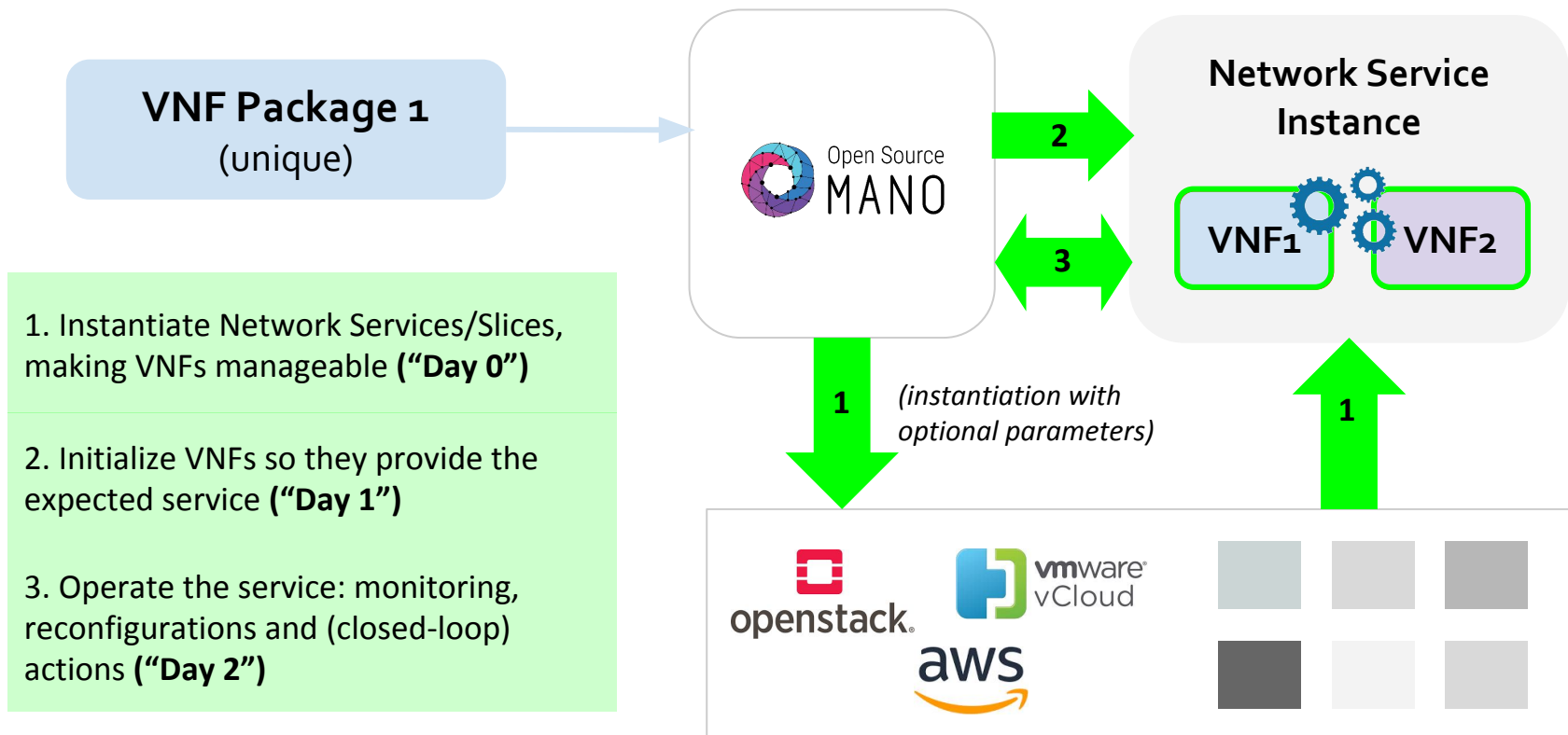
- Creation of a consumable VNF function, agnostic to NFVI/VIM.
- A simplified license model.
- As cloud-friendly as possible (towards cloud-native)
- Simplified API for configuration and monitoring.

MANO Vendors need to address:

- A complete model for providing NFVI/VIM agnosticism.
- Adaptability for automating operations for different kinds of APIs for configuration and monitoring.

VNF Onboarding efforts tackle both challenges!



We need to achieve completely onboarded VNFs, to fulfill the NFV vision and provide value to CSPs.



VNF Onboarding TF: Introduction

Beginning 2019, the OSM Leadership Group proposed to the community the creation of the VNF Onboarding Task Force, a group in charge of the **coordination and support of activities related to VNF onboarding in OSM.**

- As first action, a Chair was elected for 2 years.
- The task force is expected to be permanent.

OSM(19) 000003

Title: Terms of Reference for VNF Onboarding Task Force

From source*: OSM Leadership Group (Telefónica, Telenor, British Telecom)
 Francisco-Javier Ramón Salguero (javier.ramon@telefonica.com)

Contact(s): Pål Grønsund (Pal.Gronsund@telenor.com)
 Andy Reid (andy.bd.reid@bt.com)

Input for OSG: OSM

Contribution for*:

Decision	X
Discussion	
Information	

Submission date*: 28/01/2019

Meeting Allocation:

Decision/Action requested: Review and approve

Abstract:

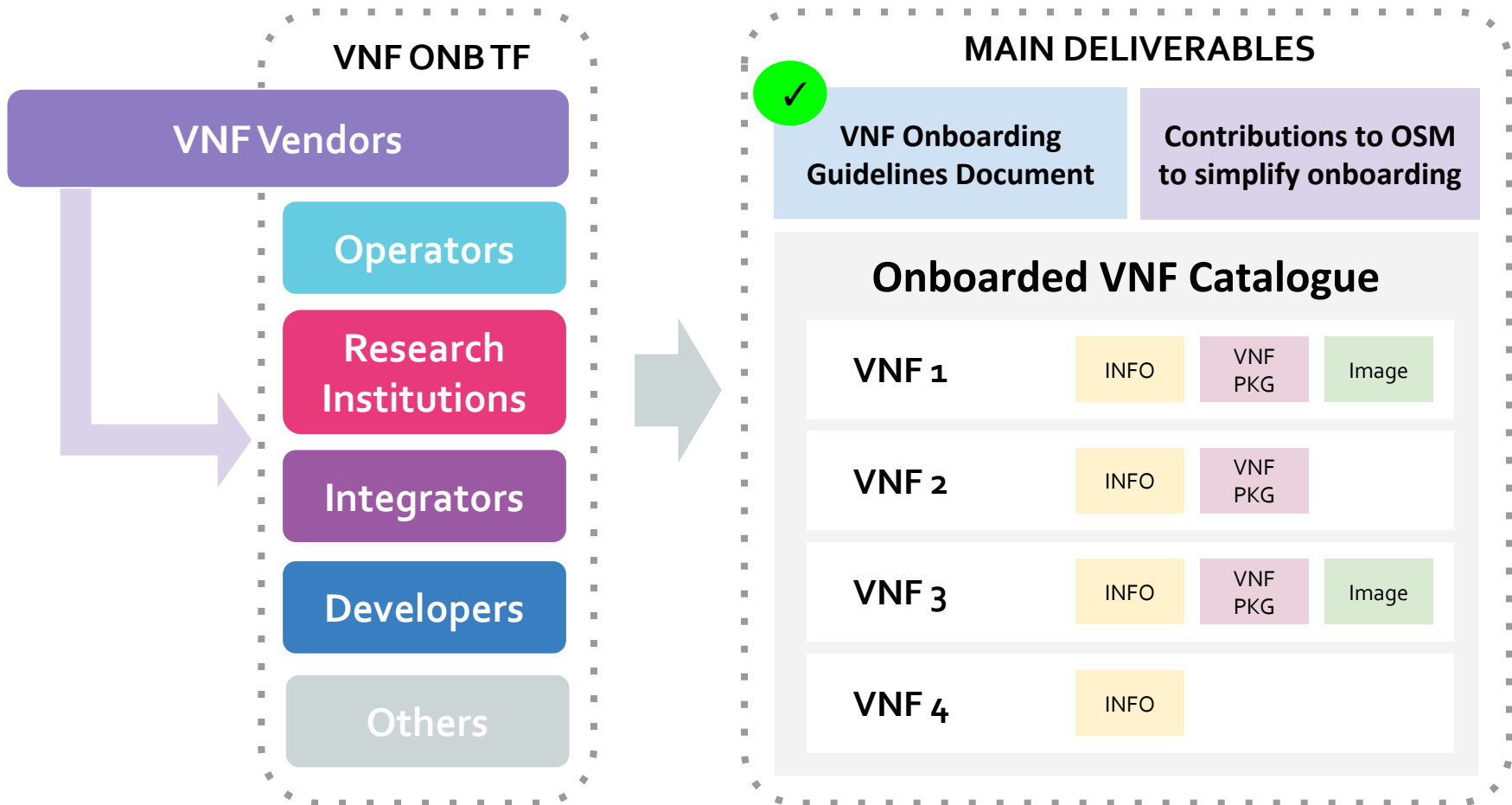
The VNF Onboarding Task Force will be in charge of the coordination and support of activities related to VNF onboarding in OSM. In particular, the following activities are envisaged:

- Define success criteria and requirements (with support from EUAG)
- Consolidate best practices and produce related documentation
- Creation of common/reusable components to simplify new onboardings. In particular, the TF will aim to identify common types of interactions: SOL002, REST, Netconf/YANG, CLI/expect, etc.
- Guidelines about how to create and/or extend VNF artifacts (e.g. charms)
- Early identification of new features and user experience improvements. Produce feedback to TSC
- Collect and publicise actively a catalogue of VNFs successfully onboarded

Duration: Permanent

VNF Onboarding TF: Short term goals


We are shaping the Open Source MANO VNF Onboarding Task Force team!



[VNFs in OSM Ecosystem](#) are expected to be first!

VNF Onboarding TF: Guidelines!

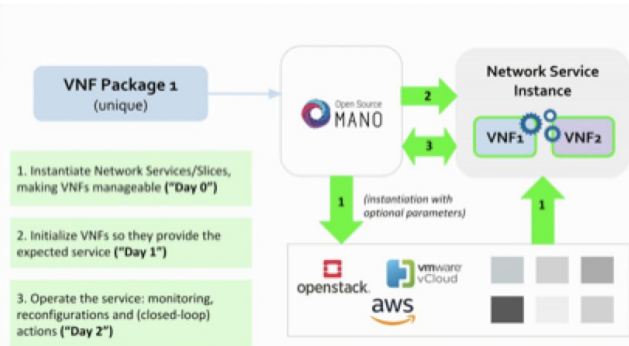
The first version of the VNF Onboarding Guidelines Document is ready and will be published right after the OSM#7 event.



Introduction

The complete onboarding process implies producing a VNF Package that will be part of the OSM catalogue for its inclusion in a Network Service.

The onboarded VNF should aim to fulfill the lifecycle stages it requires to function properly, which then, the NFV MANO layer should be able to automate. Hence, the resulting package, should include all the requirements, instructions and elements to achieve these lifecycle stages, which are: basic instantiation (a.k.a. "Day-0"), service initialization (a.k.a. "Day-1") and runtime operations (a.k.a. "Day-2").



1. Instantiate Network Services/Slices, making VNFs manageable ("Day 0")


2. Initialize VNFs so they provide the expected service ("Day 1")

3. Operate the service: monitoring, reconfigurations and (closed-loop) actions ("Day 2")

More information on the delimitation of these stages can be found in the [OSM Scope and Functionality](#) document.

As such, the document is structured in the following parts, providing guidelines for building the VNF Package to achieve each lifecycle stage successfully.

1. Onboarding Requirements



To achieve the onboarding of each lifecycle stage successfully, the following specific requirements of the VNF must be collected.

Day 0 requirements

The main objective of Day 0 is to instantiate the VNF and establish management access so it can be configured. To achieve this, the main requirements are:

Description of each VNF component

The main function of every VNF component (VDU) should be clearly described in order to ease the understanding of the VNF. For example:

VDU	Description
vLB	External frontend and load balancer
uMgmt	Universal VNF Manager (EM)
sBE	Service Backend of the platform

Defining NFVI requirements

These requirements refer to properties like the number of vCPUs, RAM GBs and disk GBs per component, as well as any other resource that the VNF components need from the physical infrastructure. For example:

VDU	vCPU	RAM (GB)	Storage (GB)	External volume?
vLB	2	4	10	N
uMgmt	1	1	2	N
sBE	2	8	10	Y

For some VNFs, Enhanced Platform Awareness (EPA) characteristics need to be defined when VNF requires 'higher than default' performance capabilities or any particular hardware architecture from the NFVI. Popular EPA attributes include:

- Compute performance attributes:
 - CPU Pinning

Other relevant initiatives

There are other initiatives letting us to further exercise VNF onboarding in OSM!

OSM POC Framework - **visibility to any use case**

Continuous activity to give visibility to OSM use cases (approved by the OSM TSC)

Multi-vendor NFV Showcase – **Multi-vendor automated NS demonstration**

Lead by Whitestack, supported by Intel, OpenStack and ETSI NFV Plugtests Programme
2nd edition will happen around October 2019 (Preparation to start during June) 2019

4th NFV Plugtests – **NFV Components interoperability tests under ETSI Standards**

3-7 June 2019 - ETSI, Sophia Antipolis (France)

NFV Interoperability

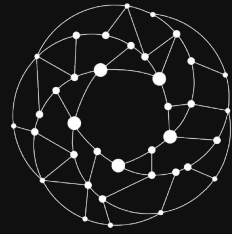
NFV API Conformance

MEC & MEC-in-NFV Interoperability (experimental)

Call for VNF Vendors: Challenge OSM !

Pick your favorite way of participating and challenge OSM to fully automate all the stages of VNF onboarding and demonstrate the NFV value to CSPs!

- **Participate in the VNF Onboarding TF:** Receive support from experts and get your VNF published in the new OSM VNF Catalogue
 - Visit: https://osm.etsi.org/wiki/index.php/VNF_TF
- **Participate in the other initiatives:**
 - **ETSI 4th NFV Plugtests:** contact the participating OSM distros (Whitestack / RIFT)
 - **OSM PoC Framework:** visit https://osm.etsi.org/wikipub/index.php/OSM_PoC_Framework
 - **2nd NFV Showcase:** contact info@whitestack.com



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Thank you!

