Common NFVI Telco Taskforce

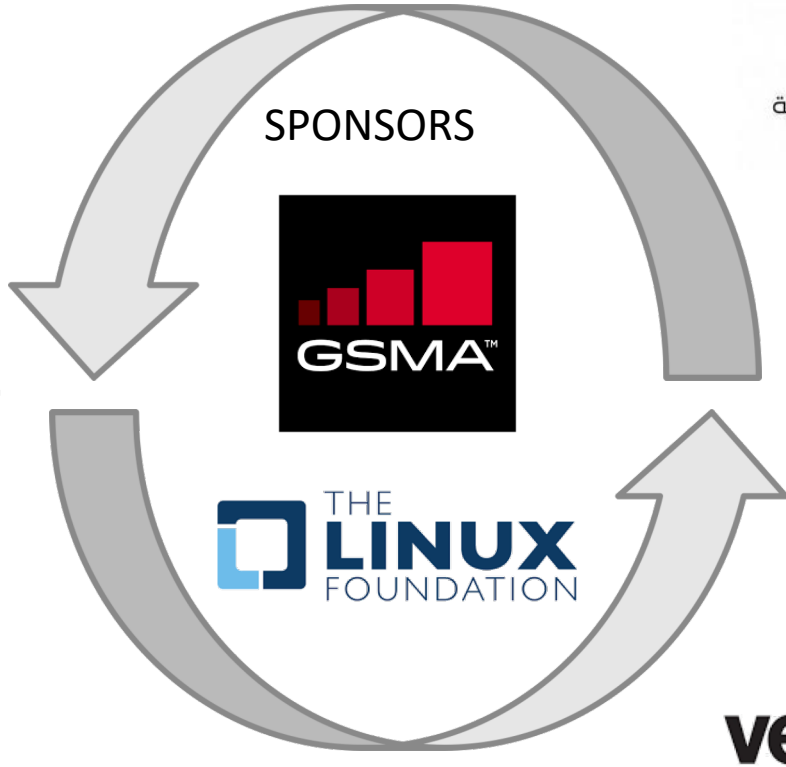
Introduction

July 2019

THE LINUX FOUNDATION

GSMA

CNTT | Membership



AT&T

Bell

swisscom

STC
الاتصالات السعودية

CHINA MOBILE

TELUS

Deutsche Telekom

dish NETWORK

Telstra

TURKCELL

verizon

Jio

orange™

SK telecom

vodafone

CNTT | COMMON NFVI TELCO TASKFORCE

Sponsored by GSMA & LNF

MISSION STATEMENT

ESTABLISH GLOBAL NFVi REFERENCE MODEL, ARCHITECTURES & NFVi | VNF CERTIFICATION LIFECYCLE TO REDUCE COST, TIME TO MARKET & COMPLEXITY OF TELCO OPERATIONS FOR THE BENEFIT OF THE BROADER COMMUNITY

REFERENCE MODEL

Framework to drive continuity of Reference Architectures for NFVi

GLOBAL NFVi | VNF CERTIFICATION LIFECYCLE FRAMEWORK

Process to implement the mission statement

REFERENCE ARCHITECTURE

Discrete NFVi specifications based on the Reference Model

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OBJECTIVES

Single NFVi Reference Model and limited number of NFVi Reference Architectures

Enhance OPNFV & CVC test ecosystem

Establish and sustain Global NFVi | VNF Certification Framework

INDUSTRY ALIGNMENT

ORGANIZE around NFVi and VNF certifications

COLLABORATE on CNTC processes and governance structure

RALLY around OPNFV and Linux Foundation Communities

DRIVE compatibility and reusability of standards & reference solutions

OUTCOMES

Three to five Reference Architectures

OPNFV certification of VNFs

Process for continuous industry-wide improvement

Reduced cost to develop & operationalize VNFs

Reduced overall time to market

SPONSORSHIP

Reference Model & Architectures hosted by GSMA

Reference Implementations & VNF Certification hosted by OPNFV

Developed in an open source community ecosystem

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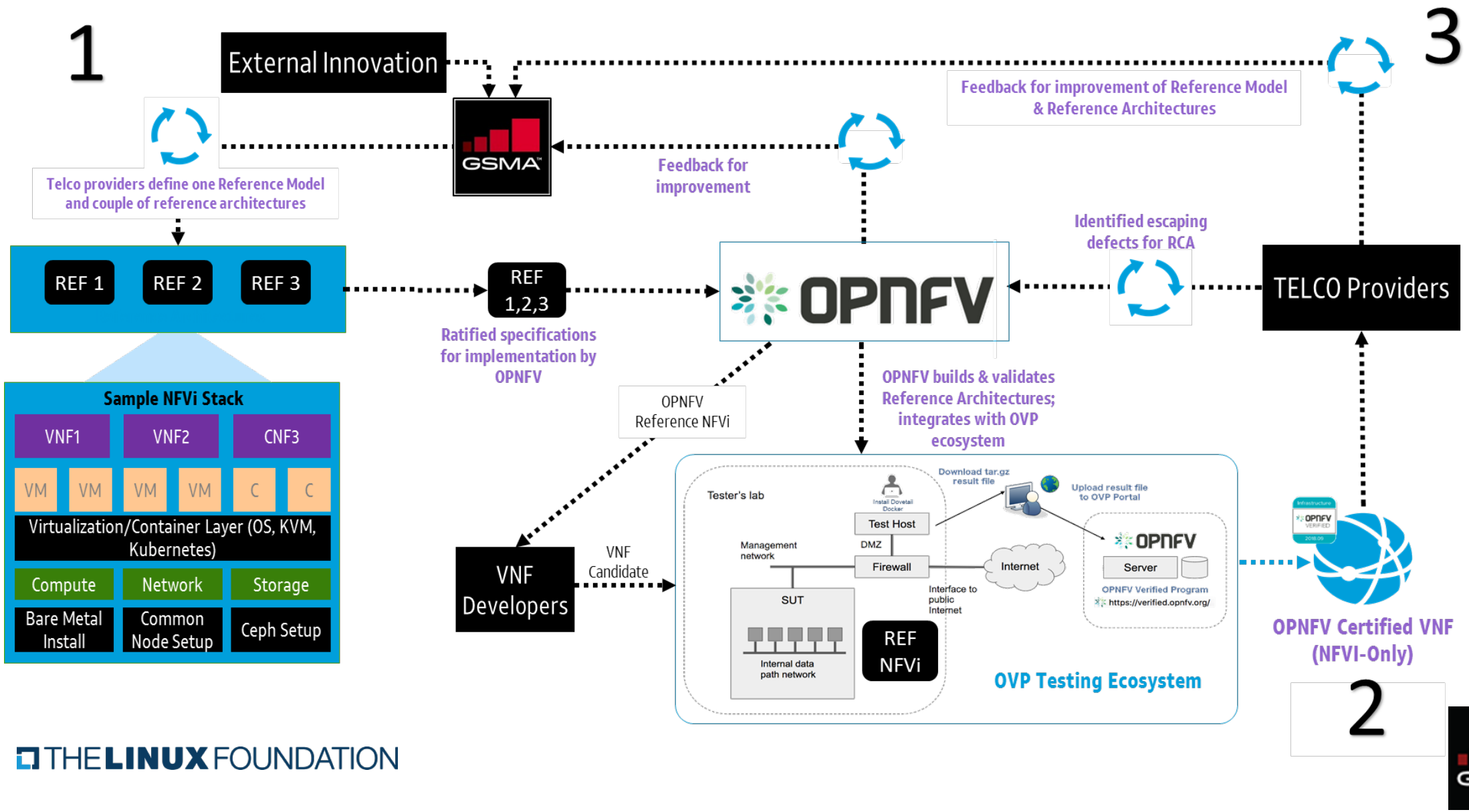
CNTT | NFVI & VNF Certification Lifecycle Framework



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CNTT | Progress to Date

Leading the industry towards a fully integrated open sourced Common NFVi solution

FEB 19

- Strategy developed to lead industry towards a Common NFVi
- Formation of operator-only ***NFVi working group***
- Bi-weekly Work Group (WG) meetings begin

MAR 19

- Defined framework and operating model to realize benefits
- Refined approach to leverage through sponsorship by ***GSMA/LFN*** communities
- Established WG plans to organize, collaborate, rally, and promote

APR 19

- Christened ***"Common NFVi Telco Task Force" (CNTT)***
- Presented vision for a ***Global VNF Certification Lifecycle Framework at ONS NA, San Jose***
- Established cadence, roadmap, work streams
- First focus on developing Reference Model

MAY 19

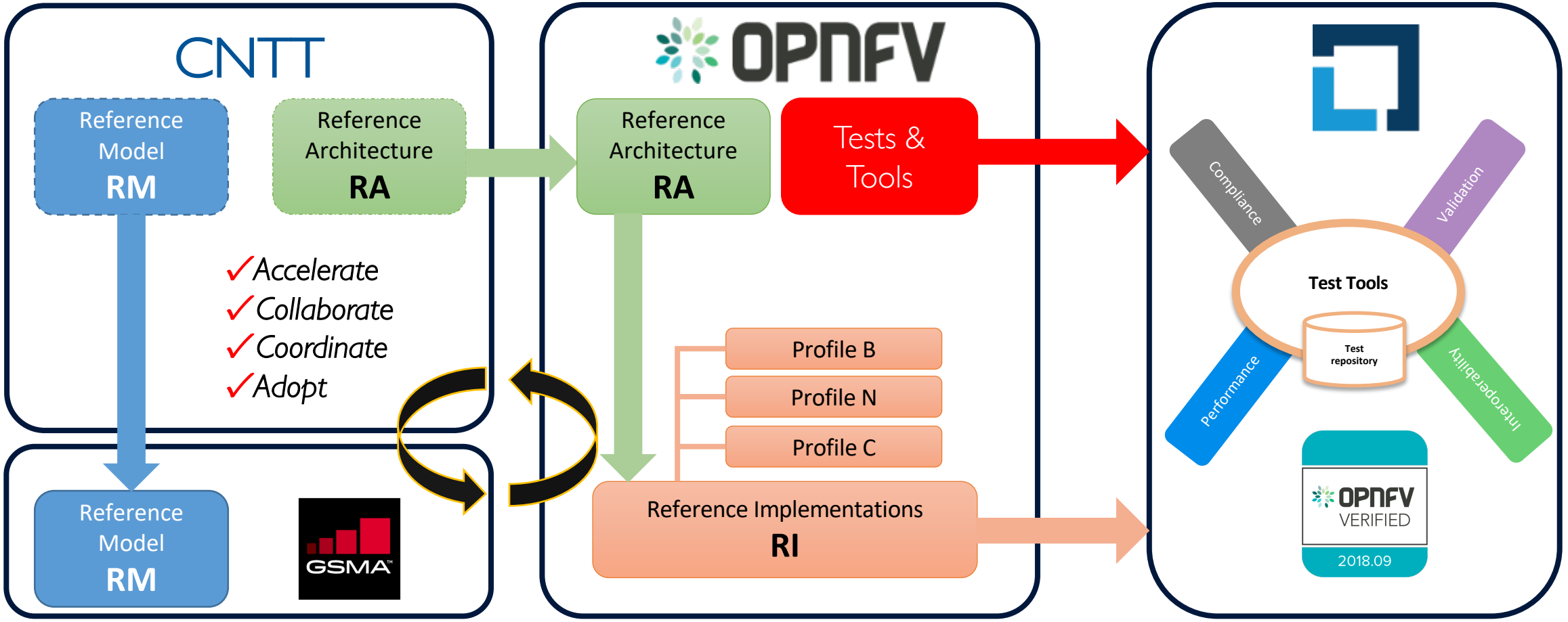
- First Face-To-Face Session in Barcelona
- Plan to formalize ***GSMA / LFN*** sponsorship and support
- Create scope for Reference Model – Ch. 1-11
- ***Governance Track and Technology Track*** launched

JUN 19

- Proposed alignment with OPNFV Iruya release to ***OPNFV Technical Steering Committee (TSC)***
- ***CNTT Technology WG*** Develops Reference Model MVP (Chapters 1-7)
- ***GSMA / LFN*** legal agreement and press release to support CNTT
- ***CNTT, LFN/OPNFV, Partners, Community invited to Paris F2F***

Gain Alignment, Drive Recruitment, Drive Adoption

CNTT | Relationship with other communities



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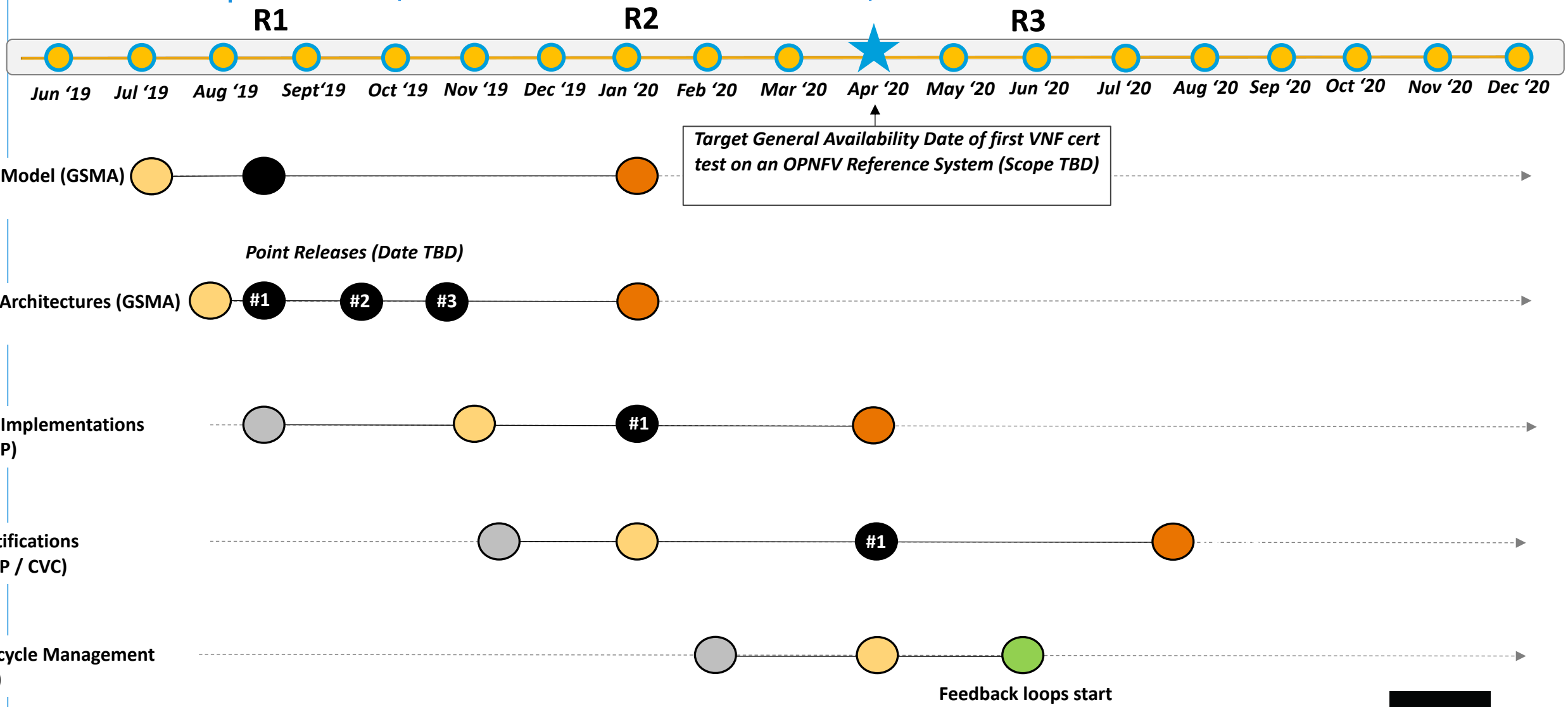
CNTT | Conceptual Release Roadmap



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CNTT | How to Contribute

</> https://github.com/cntt-n/CNTT

https://cntt-n.github.io/CNTT/

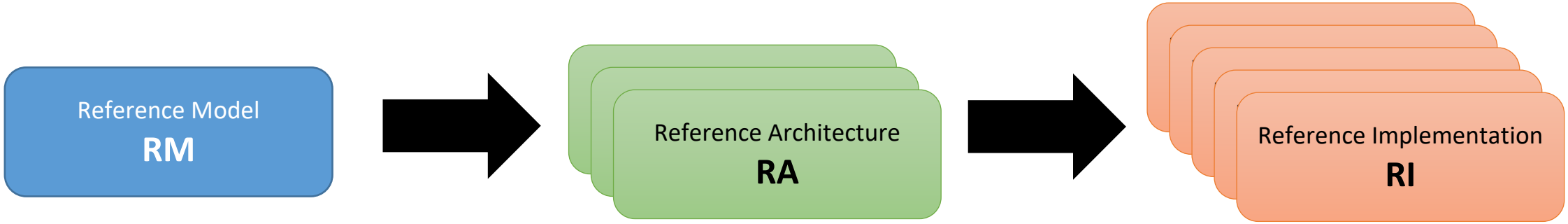
Reference Model
RM

https://github.com/cntt-n/CNTT/tree/master/doc/ref_model

Reference Architecture
RA

https://github.com/cntt-n/CNTT/tree/master/doc/ref_arch

CNTT | Ref model vs Ref Architecture, vs Ref Implementation



NFVI Abstraction

Focuses on the abstraction and how NFVI resources ad services are exposed to VNFs.

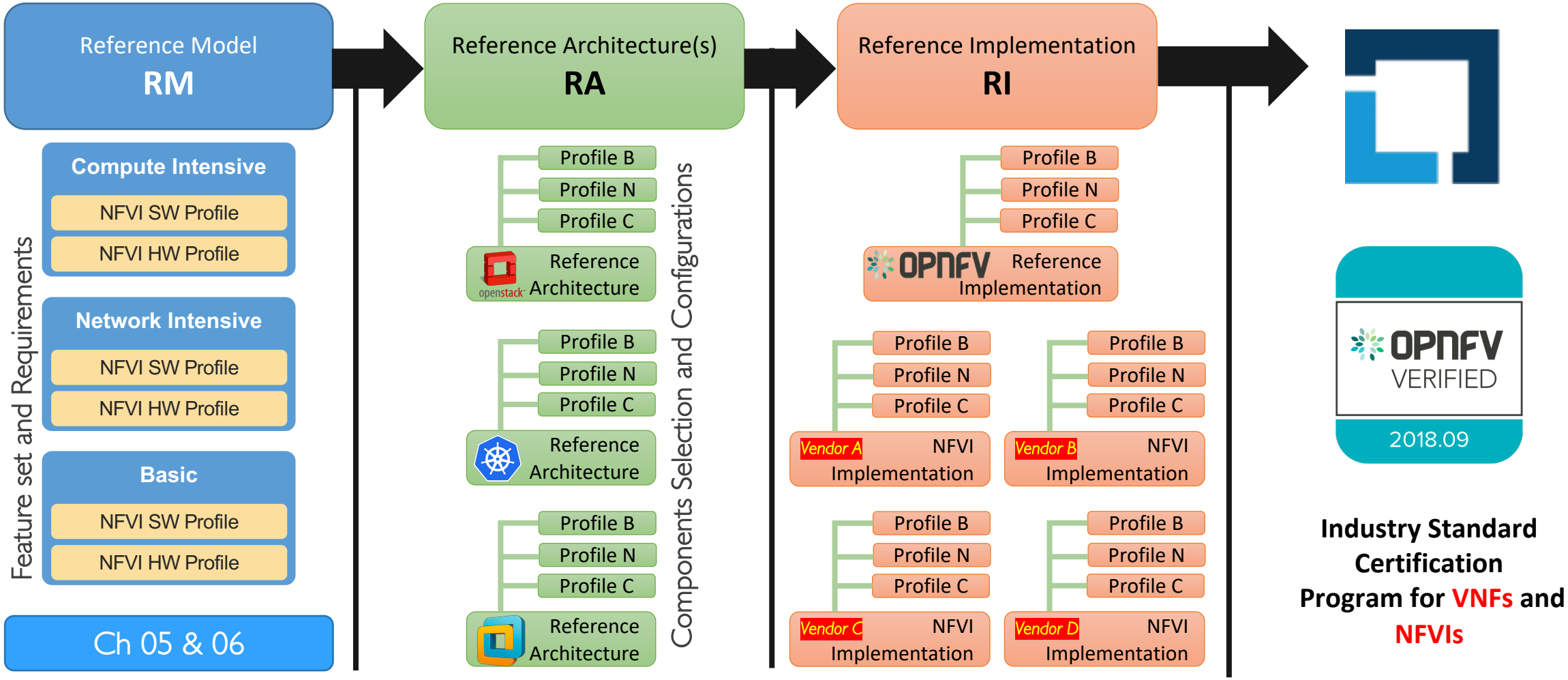
NFVI Architecture

High level NFVI system components and their interactions.. It is expected that at least one, but not more than a few, Reference Architecture will conform to the Reference Model.

NFVI Design & Implementation

Focuses on the design and implementation of NFVI Reference Architecture. Each Reference Architecture is expected to be implemented by at least one Reference Implementation

CNTT | From Ref Model to Ref Architecture to Ref Implementation



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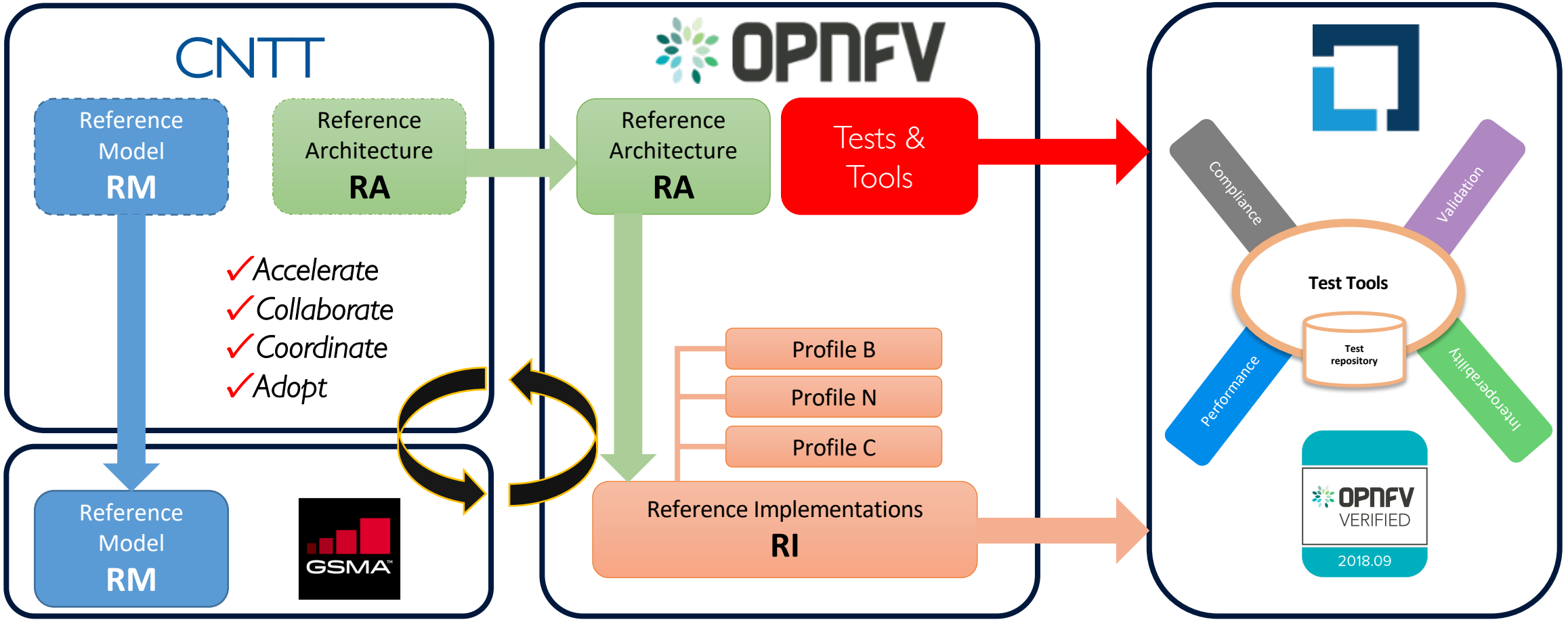
CNTT | Relation to communities



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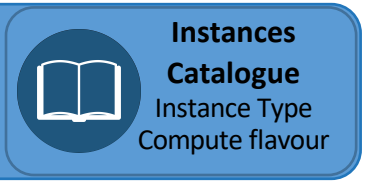
CNTT | Artefacts.

L0 : Infra Abstraction for VNFs

- Common across any IaaS/Cloud/VIM Technology choice.
- Exposes virtual resources to VNFs in form of profiles/compute flavors.
- Defines set of capabilities and metrics of NFVI concerning VNFs.



L1: Cloud Platform Agnostic Req

- Set of features of NFVI to deliver capabilities.
- Act as functional requirements for NFVI Reference Architecture.
- Common across any IaaS/Cloud/VIM Technology choice.

L2 : High Level

- Multiple instances of this artefacts per technology choice (OpenStack, Vmware, etc).
- The content of each instance is common across any vendor for the same technology choice.
- Focus on high level components and interfaces (such as virtio for OpenStack) .

L3 : Component Level

- Multiple instances of this artefacts per technology choice (OpenStack, Vmware, etc).
- The content of each instance is common across any vendor for the same technology choice.
- Focus on functional blocks and interfaces for interoperability between components .

L4 : High Level Design

- There will be multiple instances of this artefact (one per distribution/vendor products).
- The content of each "instance" is specific to that distribution, and includes configuration specifics that conform to higher levels

L5: Low Level Design

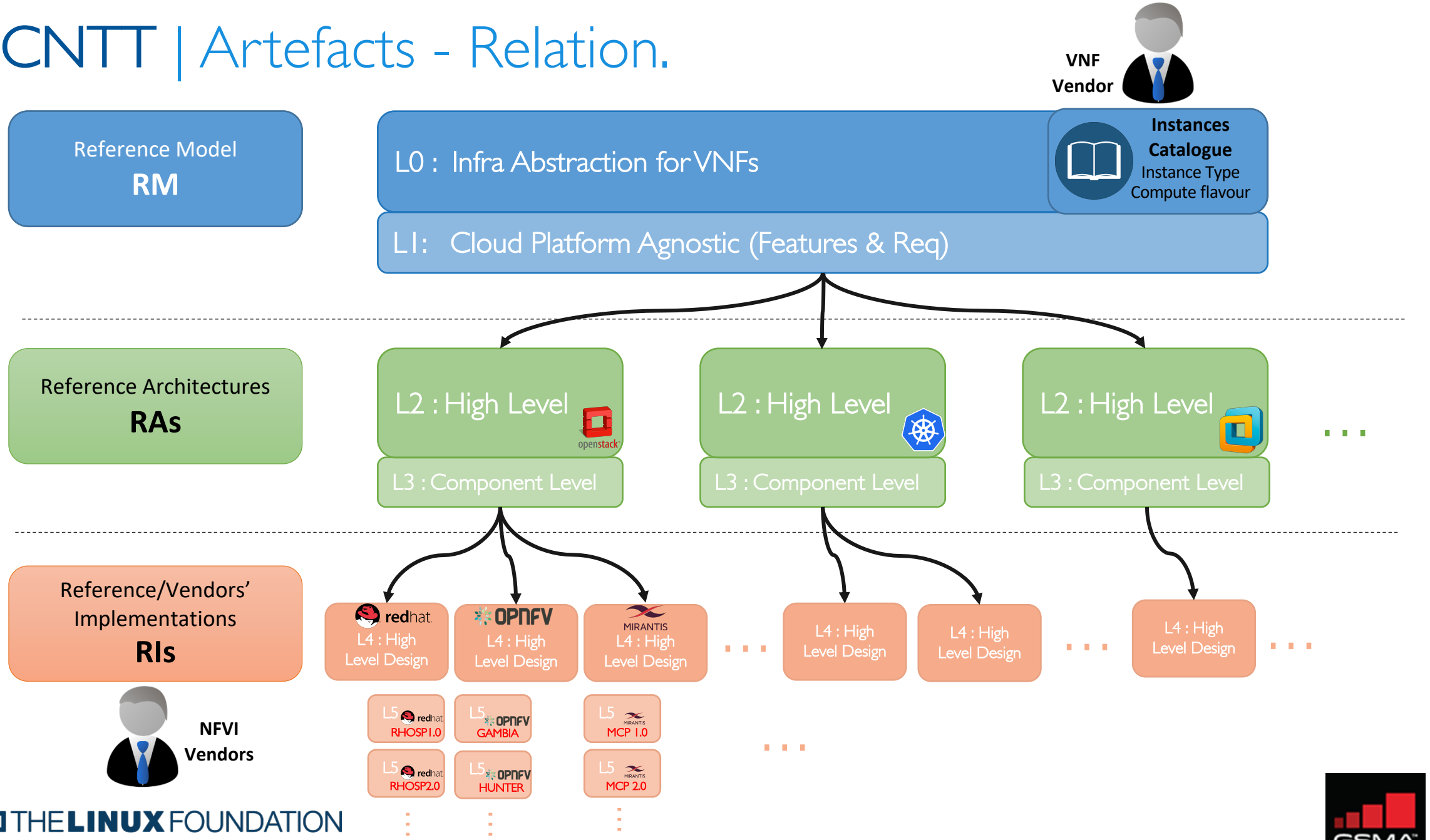
- As above but with more specific detailed relative to a specific version of a distribution.
- Also, this layer will include CPU architecture specifics?

Reference Model

Reference Architecture

Reference Implementation

CNTT | Artefacts - Relation.



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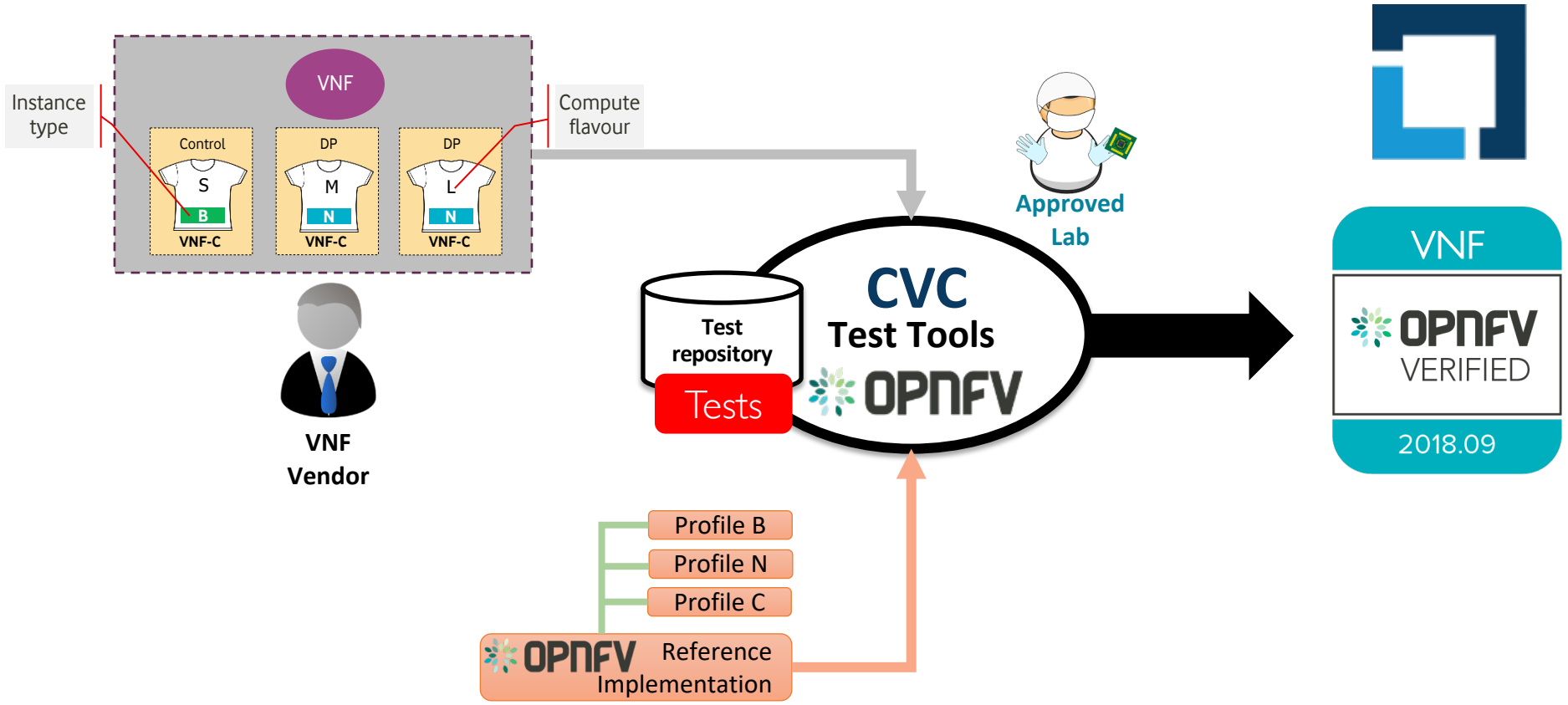
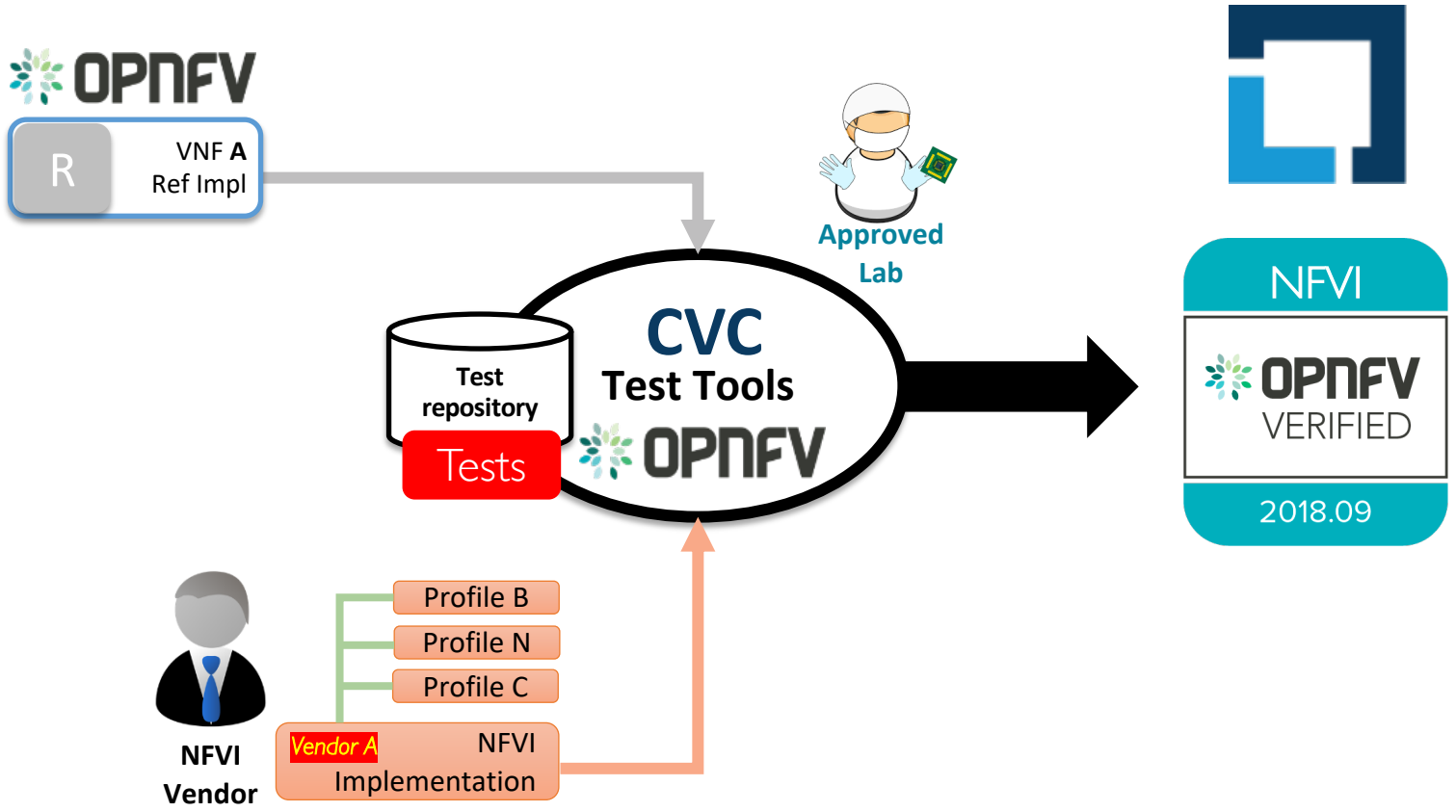
CNTT | OVP - Expectation from VNF Vendors

I have a VNF, I would like to certify it, what should I do?



CNTT | OVP - Expectation from NFVI Vendors

I have a NFVI solution, I would like to certify it, what should I do?



Appendix