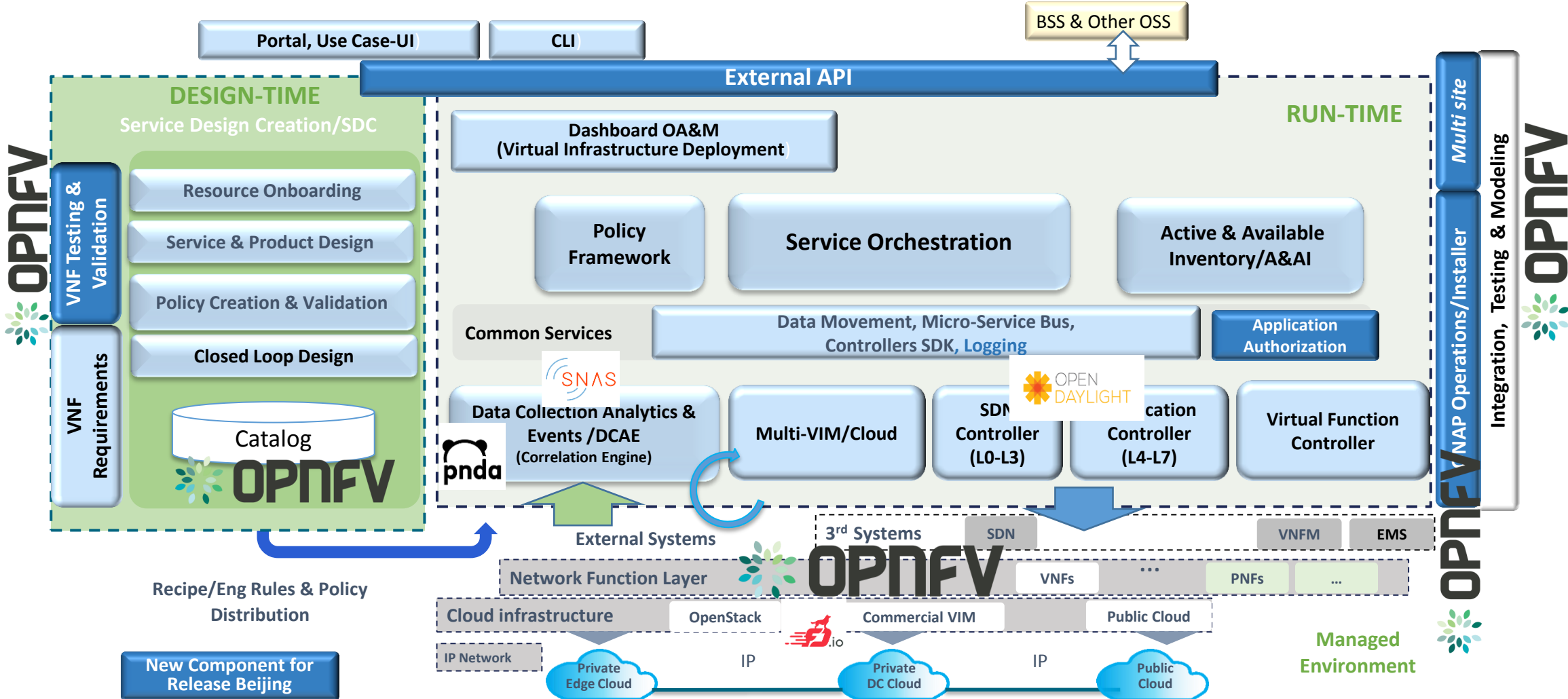# What cross project within LFN should focus on at ONS

Jamil Chawki & Eric Debeau
Tina Tsou & Frank Brockners

ONAP VF2F event

5-8 February 2018

ONAP and LFN projects positioning

Collaboration with other LFN projects

- OPNFV & Fdio

	ONAP	OPNFV
- Using OPNFV as an NFVI	Multi-Cloud	Auto ?
- ONAP-Automated OPNFV	Integration	Auto
- Using CI/CD tooling /XCI	Integration	Pharos
- Integration of Reference VNFs	SDC	Ref VNF
- Integrating CVP & VVP (NFVI)	VVP	CVP

- ODL

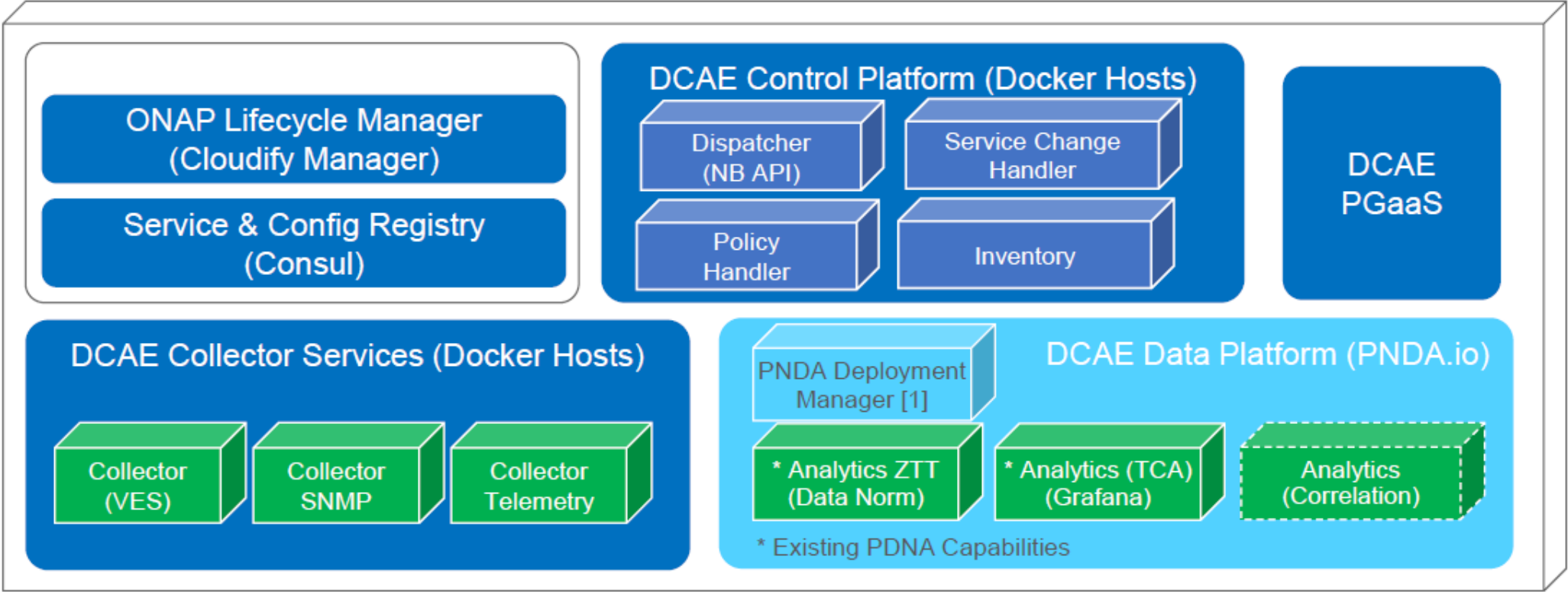 | | |
  |---|---|
  | • To release SDN-C SLI | SDN-C |
  | • To push Ansible & Chef interfaces | APP-C |
  | • Align ODL & ONAP Controllers | SDN-C, APP-C & CCSDK |

  - PNDA:
    - Using PNDA in ONAP — DCAE
  - SNAS
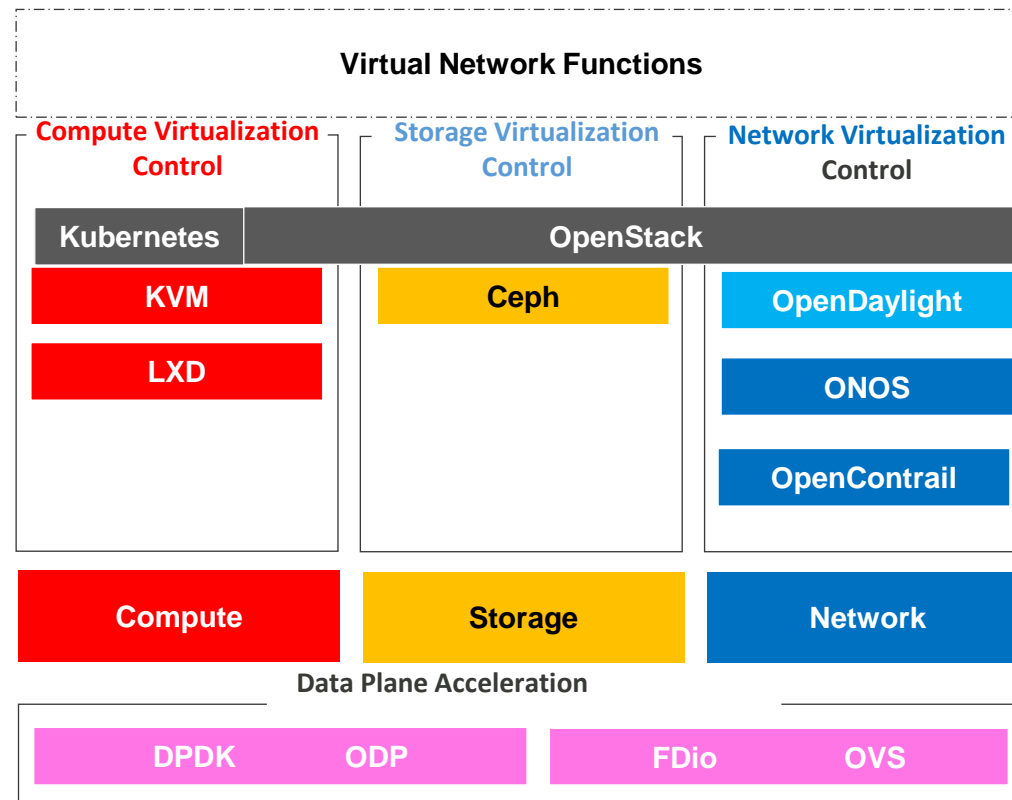   - Using SNAS as a use — DCAE & SDN-C
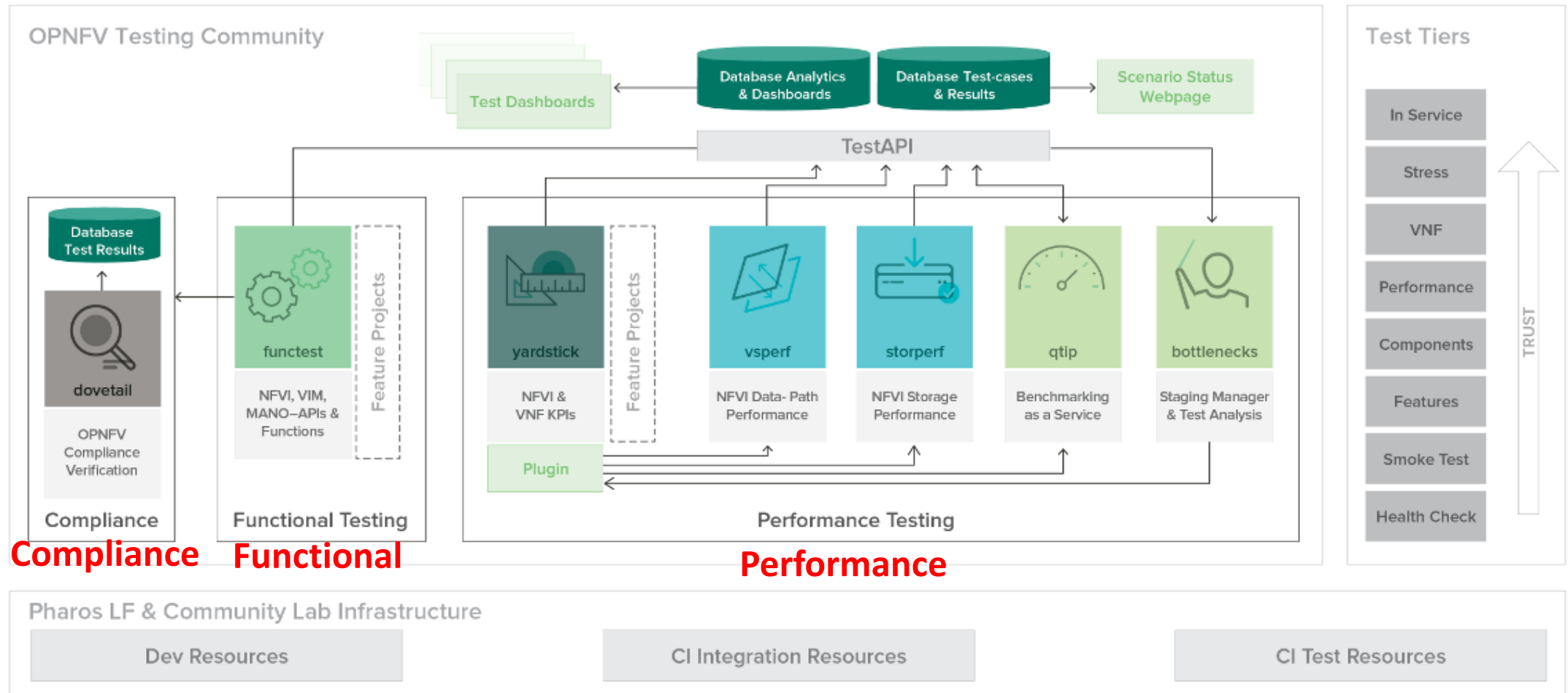
Using PNDA in DCAE

OPNFV

ONAP requires cloud/ NFVI infrastructure for ONAP components - VNF deployments

Reference VNFs

- Open source VNFs used to verify and to benchmark OPNFV infrastructure
    - vIMS Clearwater Metaswitch,
    - vFW Canonical
    - vAAA Canonical
    - vPing Linux
    - vRouter OpenWRT
    - vIDS Snort
    - vSBC /SIP Open SIPS
    - vIMS SIP Proxy & media Server Emerginov Orange
    - VNFs for Release Euphrates
    - CG-NAT Carrier Grade Network Address Translation
   - vACL Access Control List
    - vPE Provider Edge Router

OPNFV CI integration and testing ecosystem

OPNFV Testing Community

Test Dashboards

Database Analytics & Dashboards | Database Test-cases & Results

Scenario Status Webpage

TestAPI

Database Test Results

dovetail

OPNFV Compliance Verification

Compliance

functest

NFVI, VIM, MANO–APIs & Functions

Feature Projects

Functional

yardstick — NFVI & VNF KPIs

Feature Projects

Plugin

vsperf — NFVI Data-Path Performance

storperf — NFVI Storage Performance

qtip — Benchmarking as a Service

bottlenecks — Staging Manager & Test Analysis

Performance

Performance Testing

Test Tiers

In Service
Stress
VNF
Performance
Components
Features
Smoke Test
Health Check

TRUST

Pharos LF & Community Lab Infrastructure

Dev Resources | CI Integration Resources | CI Test Resources

XCI

- The XCI initiative integrates the latest from all supported branches of select upstream projects on a periodic basis instead of waiting for a major release. The initiative will start with regular integration of OpenStack Cloud, OpenDaylight SDN controller and the FD.io virtual switch.

- Benefits:
    - Upstream changes can now be utilized by OPNFV very quickly; e.g. daily.
    - Feedback can now be provided rapidly, again say daily. A feature development or bug fix cycle can now be compressed from months to just days.
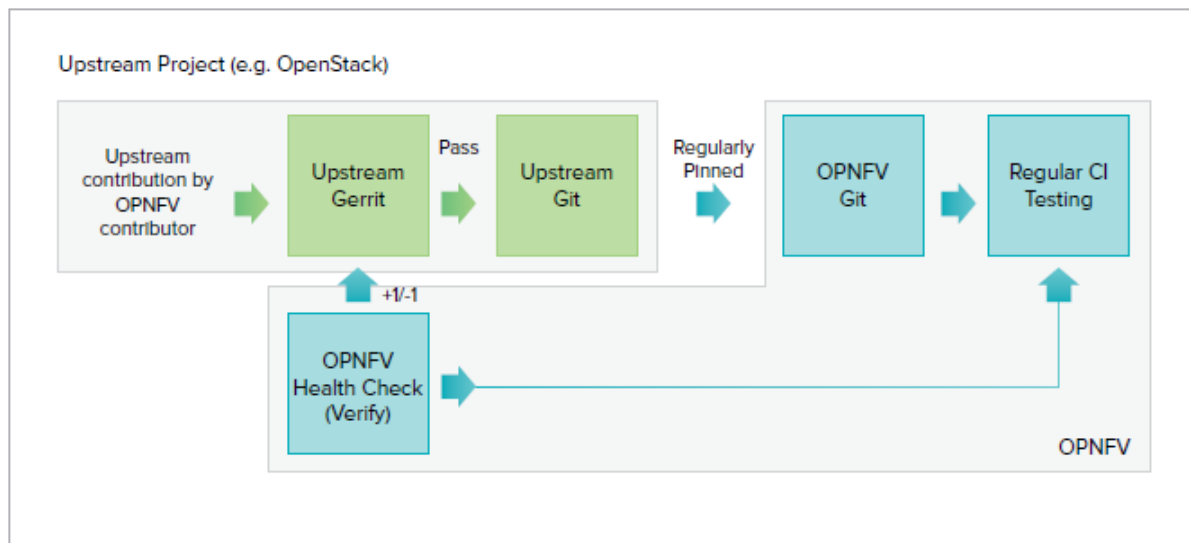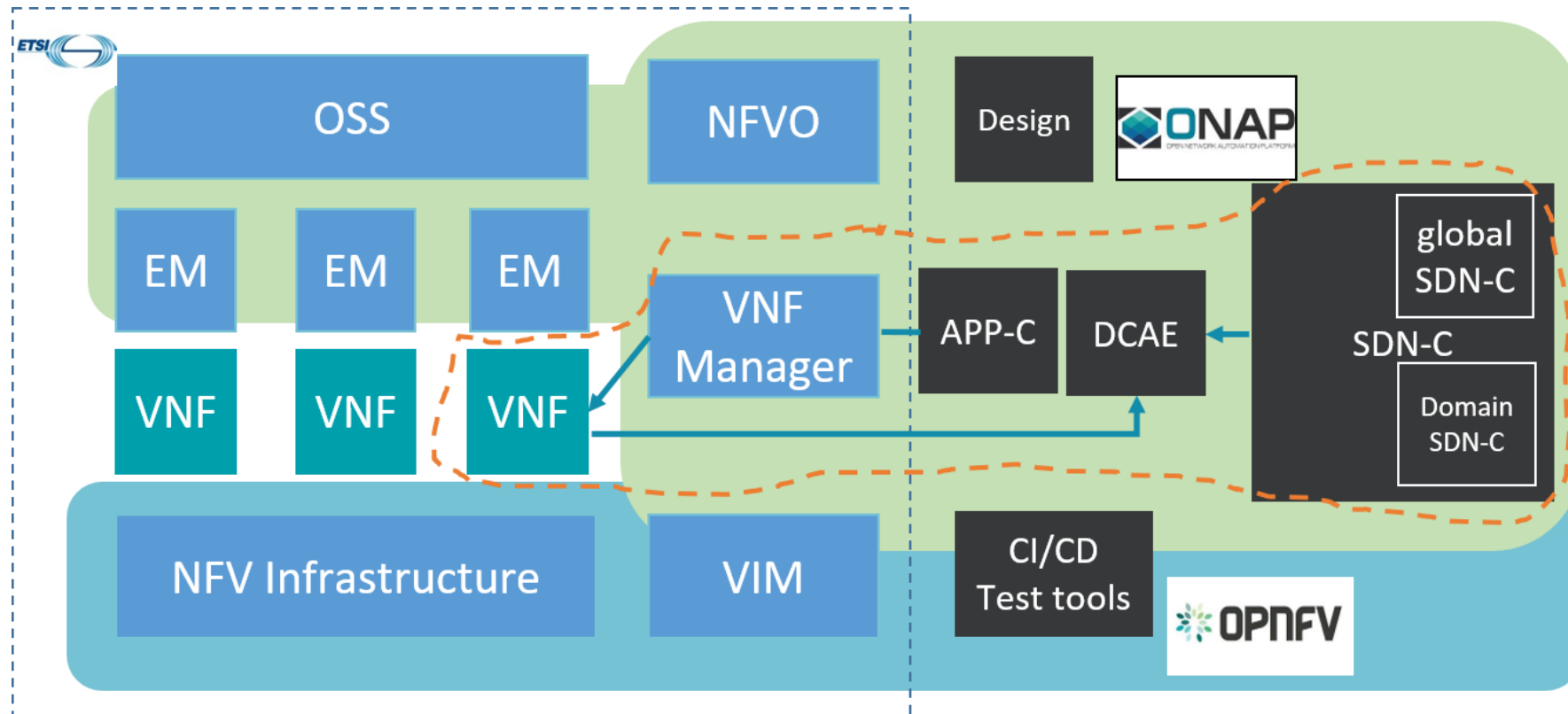

XCI Integration Tasks
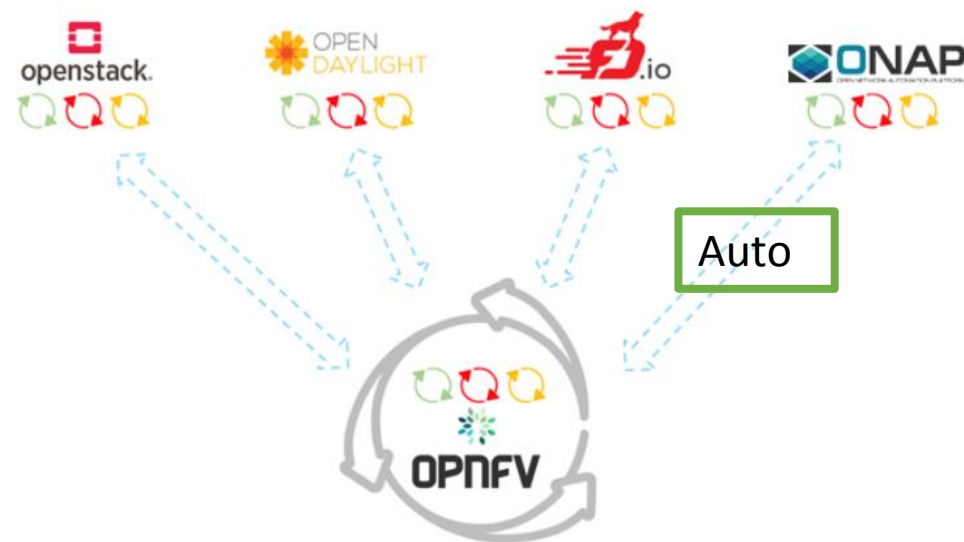
ONAP-Automated OPNFV

- ONAP component integration and verification with OPNFV reference platforms/scenarios

Compliance and Verification program CVP

- Test Areas
  - Basic cloud capabilities
  - Basic VNFs need

  - NFV specific:
    - SDN VPN,
    - IPv6

  - High availability:
    - OPNFV HA
    - OPNFV Performance
    - Service continuity on control services

- Test Area: Basic cloud capabilities
  - **Openstack Refstack-compute test cases Image, Identity, Compute, Network, Storage**
  - **OPNFV-Functest/vPing, including both user data and ssh**
  - *Port security and security groups*
  - *VM lifecycle events*
  - *VM networking*
  - *VM resource scheduling*
  - *Forwarding packets in the data path*

- Test Area: SDNVPN
  - *OPNFV-SDNVPN*

- Test Area: IPv6
  - *OPNFV-IPv6*
  - *Limited to overlay tests, v6Ping*

- Test Area: High Availability
  - **OPNFV-HA**
  - **OPNFV-Yardstick**
  - **Limited to service continuity verification on control services**

Mandatory test cases, *Optional test cases*

Conclusion during ONAP Developer Event, Paris September 2017

- **OPNFV:**
  - Testing OPNFV infrastructure in ONAP
    - Rapid Installation
    - 2 cloud infrastructure supported by OPNFV (OpenStack and K8s)
    - 3 SDN controllers …
  - Could OPNFV support carrier grade testing and certification?
  - Multiple reference VNFs supported by OPNFV
  - CI/CD is the third area of OPNFV leveraged by ONAP.
  - OPNFV supports branch code testing without waiting for completing M4
- **ODL:**
  - Which version of ODL is being used by ONAP
  - Should we release SDN-C SLI in ODL and make it standard?
  - Should we push APPC Ansible & Chef interfaces back to ODL?
- **PNDA**: We should also explore PNDA and DCAE collaboration.

THE LINUX FOUNDATION

ONAP
OPEN NETWORK AUTOMATION PLATFORM

- Thank You

OPNFV Scenarios

[Cloud] - [controller] - [feature] - [mode] - [option]

[Cloud]: mandatory
- example values: os/openstack- k8/kubernetes

[controller]: mandatory
- example values: nosdn, ocl/contrail, odl/opendaylight, onos

[feature]: mandatory
- example values: nofeature, kvm, ovs/open virtual switch

[mode]: mandatory
- possible values: ha/high availability, noha

[option]: optional

https://wiki.opnfv.org/display/pharos/Community+Labs
https://wiki.opnfv.org/display/pharos/Pharos+Home

- os-nosdn-kvm_ovs-ha
- os-nosdn-vlan-ha
- os-odl_l2-sfc-ha
- os-odl_l2-bgpvpn-ha
- os-nosdn-fdio-noha
- os-odl_l2-fdio-ha
- os-odl_l3-fdio-ha
- os-odl_l3-vpp-ha
- os-ocl-nofeature-ha
- os-onos-sfc-ha
- os-nosdn-lxd-ha
- k8-nosdn-os-lb

OPNFV CI

- Communications Service Providers indicates that 80% of those surveyed feel that the DevOps software development model is essential or important to NFV success.

- OPNFV CI integrates and installs (by invoking different installers) different combinations of stack components, projects and configurations, called OPNFV scenarios, on a daily basis and executes a smoke test on each scenario.
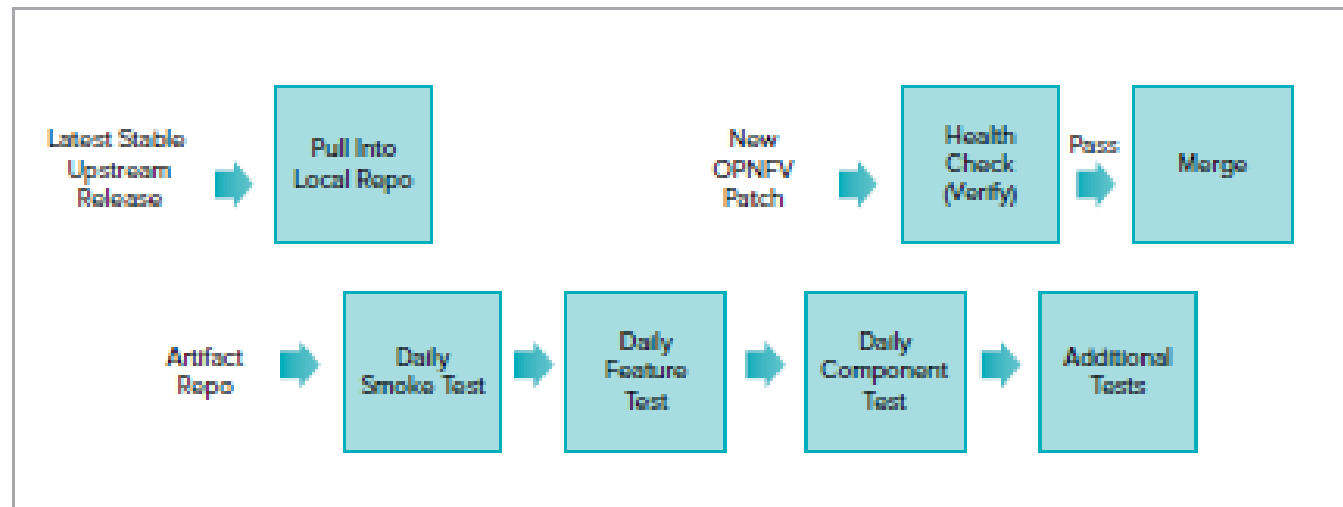
Simplified View of the OPNFV CI Pipeline