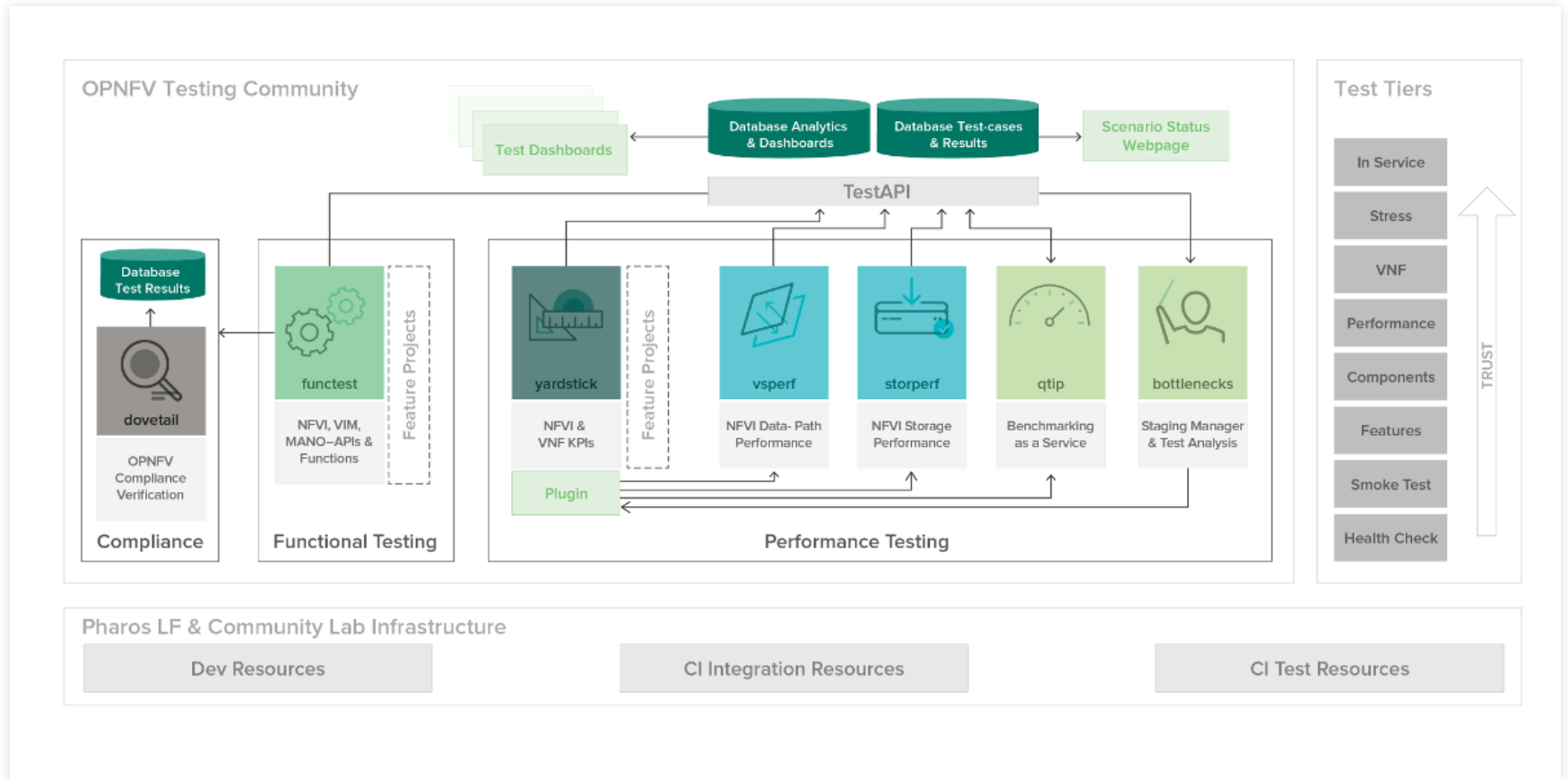


FUNCTEST ON STEROIDS

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OPNFV



VERIFY OPENSTACK AND KUBERNETES

FUNCTEST IN A NUTSHELL

- verify any kind of OpenStack and Kubernetes deployments
- conform with upstream rules (OpenStack gate jobs and Kubernetes conformance tests)
- ensure that the platforms meet Network Functions Virtualization requirements

FUNCTEST SUITES

- as many upstream functional tests as possible (e.g. Tempest, neutron-tempest-api, Barbican, Patrole...)
- upstream API and dataplane benchmarking tools (Rally, Vmtp and Shaker)
- additional VNF deployments and testing (vIMS, vRouter and vEPC)

Dovetail only runs few Functest functional tests and then we have to verify any OPNFV-certified scenarios via Functest anyway

WHAT'S NEW IN FUNCTEST?

- new testcases were quickly integrated in Functest: Patrole, Barbican, Shaker, ...
- all testcases can run in parallel to decrease the overall duration
- the resources cleaning has been improved
- **our testcases may be run vs VIM in production**
- **it includes most of the OpenStack gate jobs**

SUPPORT OF OS AND K8S MASTER

Functest	OpenStack	Kubernetes
master	master	master
hunter	rocky	v1.11.3
gambia	queens	v1.11.3

< 50 EUROS



REUSE OF OPNFV

XTESTING IN A NUTSHELL

- allow the developer to work only on the test suites without diving into CI/CD integration
- simplify test integration in a complete LFN-based CI/CD toolchain (e.g. Jenkins, Testing Containers, Test API and dashboard)
- allow a proper design and verify multiple components in the same CI/CD toolchain (OpenStack, Kubernetes, ONAP, etc.)

**Easy to use and very useful for any CI/CD toochain
(unlinked to Infrastrure)**

A USER STORY ONAP

- all tests are run by a specialized Docker container(<**100 MB**) instead of the classical ONAP testing virtual machine (> **1GB**).
- the container mainly inherits from opnfv/xtesting and is completed by:
 - Python dependencies
 - all ONAP Robot Framework files retrieved from the original repositories
 - testcases.yaml describing the testcases

[Orange-OpenSource/xtesting-onap-robot](https://github.com/Orange-OpenSource/xtesting-onap-robot)

WHAT'S NEW IN XTESTING?

- new ansible roles and playbooks have been developed to allow **deploying your full CI/CD toolchains in few minutes** (Jenkins, Minio, TestAPI, MongoDB and Docker registry)

```
virtualenv xtesting
. xtesting/bin/activate
pip install ansible docker
ansible-galaxy install collivier.xtesting
git clone https://gerrit.opnfv.org/gerrit/functest-xtesting fu
ansible-playbook functest-xtesting-src/ansible/site.yml
deactivate
```

They are already reused in Functest and by Orange out of the Infrastructure domain

COLLECT RESULTS

OPNFV TEST DATABASE IN A NUTSHELL

- it's a fair comparison of Neutron implementations (Agents vs SDN controller)
- it stores all verification results and all performance data from different hardware over the world which could be easily postprocessed
- it could be very useful to select the adequate opensource solutions regarding metrics and capabilities

WHICH NEUTRON BACKEND?

- most Neutron standalone and OVN scenarios pass Functest decently
- no ODL scenarios pass the advanced testcases (benchmarking tools and VNFs). It's still unclear if it's due to the Installers, ODL or POD misconfigurations.
- no Tungsten Fabric is released in Gambia

We expected that ODL results would have improved before the first Gambia corrective

CONTRAIL TESTING (OUT OF OPNFV)

- 3.X 4.X: mostly verified except some functional tests about visibility which fail due to the falsy admin role (they can be easily blacklisted)
- 5.X: a limited set of bugs in Contrail mostly forbid running few functional tests and benchmarking tools:
 - wrong external network listing
 - Contrail doesn't allow booting a VM without network (and elects the wrong network)

AND PERFORMANCE?

- OVS DPDK is not fully integrated by an OPNFV installer (Fuel is in a good shape to support it)
- the only scenario including VPP is not part of Gambia

From the time being, we can't evaluate the benefits of OVS DPDK or VPP thanks to OPNFV

CONCLUSION

GAMBIA

- Functest and Xtesting are powerful and easy to (re)use (containers, jenkins jobs, ansible playbooks, Raspberry PI, etc.).
- the number of installers and scenarios decreased in Gambia (it's still unclear regarding the overall quality). **What about OPNFV Test Database if it decreases again in 2019?**

AND BEYOND

- test frameworks are now considered as crucial for OPNFV (see [Last OPNFV Marketing update](#)) and Functest and Xtesting could be already widely reused out of OPNFV
- the new test-driven approach as proposed by the [OPNFV Strategic Plan](#) could increase **the quality of all scenarios**. But we are also suggesting to let the installers decide their test cases.