



**OPNFV**

□ **LINUX FOUNDATION**  
COLLABORATIVE PROJECTS

# Leveraging open source test projects for NFVI compliance validation

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OPNFV facilitates the development and evolution of NFV components across various open source ecosystems. Through system level integration, deployment and testing, OPNFV creates a reference NFV platform to accelerate the transformation of enterprise and service provider networks. Participation is open to anyone, whether you are an employee of a member company or just passionate about network transformation.

**OPNFV defines use cases, integrates & tests what other projects (OpenStack, Kubernetes, ODL, OVS, fd.io) create!**

# OPNFV Verified Program (OVP)



- OPNFV Verified Program (OVP) verifies that a commercial VIM/NFVI exposes the same
  - key APIs,
  - behaviors, and
  - characteristicsas the OPNFV reference platform
- Main objective: Reduce VIM selection and VNF onboarding cost
  - Establish industry-accepted technical baseline
  - Simplify RFIs and RFPs
- Main components of OVP
  1. Dovetail: automated test and reporting tool leveraging OPNFV and upstream test tools
  2. OVP web portal: upload, display, and review results



# OPNFV Verified Program (OVP)



- Test scope and coverage
  - Based on tests developed by OPNFV and upstream communities
- Releases of OVP
  - Labeled by release date (e.g. 2018.01)
  - Tied to specific releases of OPNFV reference platform
    - 2018.01 => Danube
    - 2018.0x => Fraser
  - 6 months release cadence
  - 3 months shift wrt OPFNV platform releases
- Ways of Participation
  - Self testing: Deploy and run Dovetail in private lab
  - 3<sup>rd</sup> party labs: Utilize services offered by selected labs (under development)



# Relationship to “OpenStack Powered” programs



- OpenStack Powered programs
  - Maintained by OpenStack Interop working group
  - Governed by the OpenStack Board of Directors
  - Test cases selected from Tempest and run by RefStack tool
  - Originally focused on API interoperability of (public) clouds
  - Ongoing efforts to establish programs targeting specific capabilities
    - Heat, Designate, NFV
- Relationship between OVP and OpenStack Powered
  - OVP is a complementary effort specifically focusing on NFV use cases
  - Dovetail / OVP attempt to adopt best practices and lessons learned



# Scope of OPNFV Verified



## OPNFV Verified 2018.01

### Mandatory test cases

- OpenStack interop API tests (205 tests)
- Basic layer 2 packet forwarding (2 tests)
- OpenStack control service high availability (8 tests)

### Optional test cases

- IPv6 tenant networks (25 tests)
- BGPVPNs (4 tests)
- Fundamental VIM capabilities (30 tests)

## Potential Future Scope

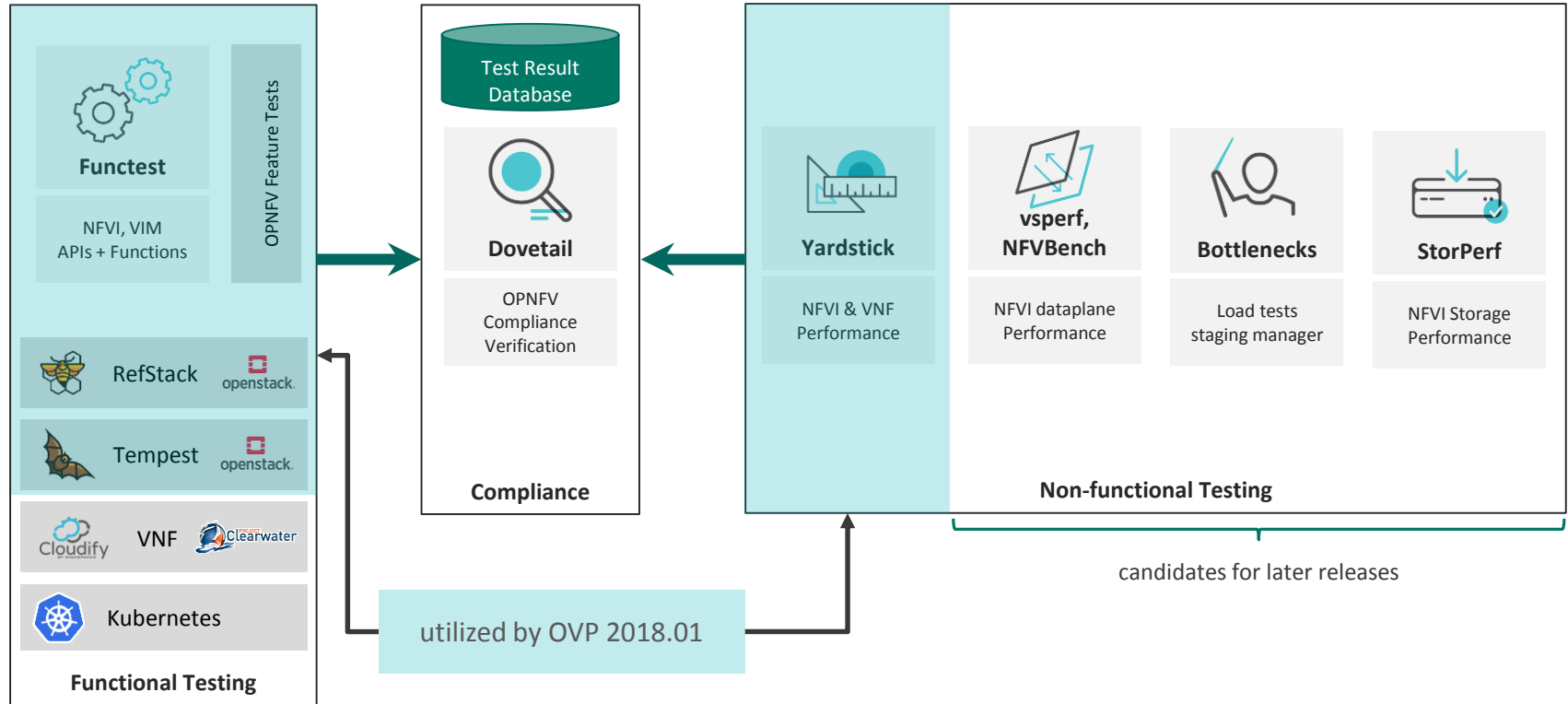
### Future test case candidates

- Neutron Trunk ports
- OpenStack Tempest smoke tests
- OPNFV SNAPS smoke tests
- BGPVPN Tempest tests
- SDN Controller (OpenDaylight) high availability
- vSwitch (Open vSwitch) high availability
- Sample VNF lifecycle management
- Load tests
- ... more to come ...

Dovetail

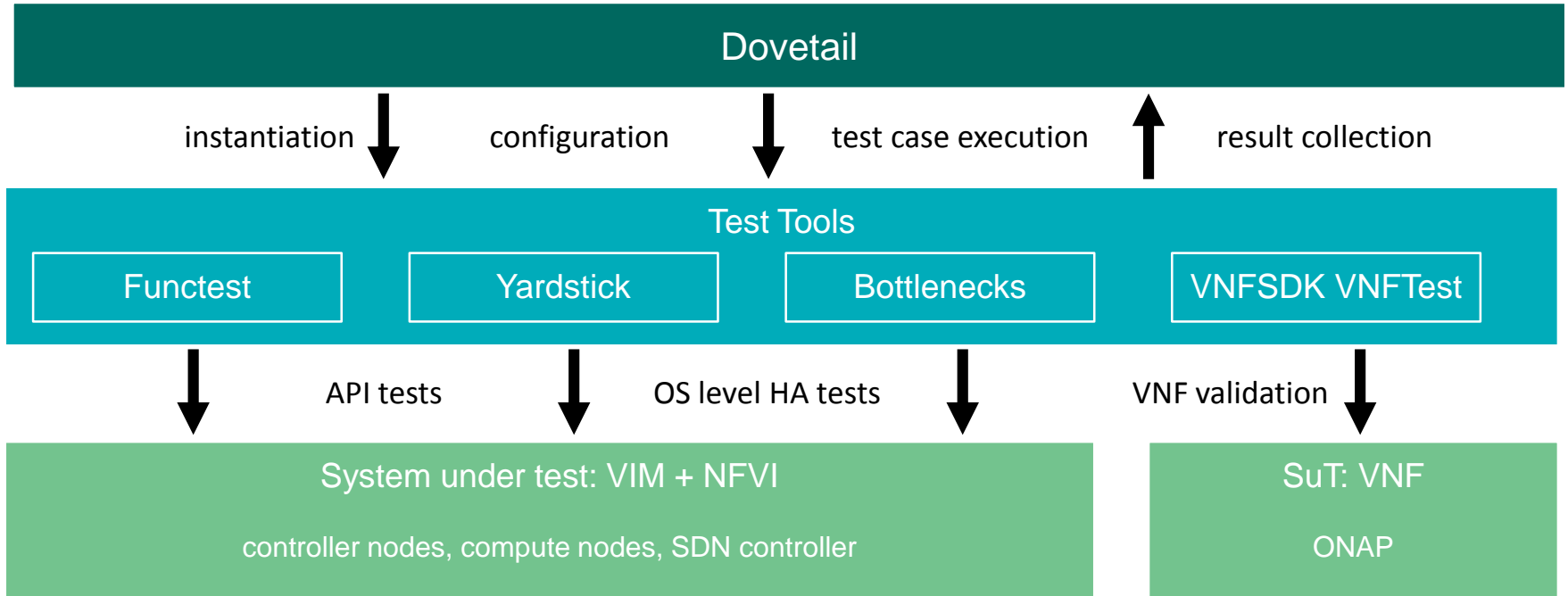


# Test Ecosystem

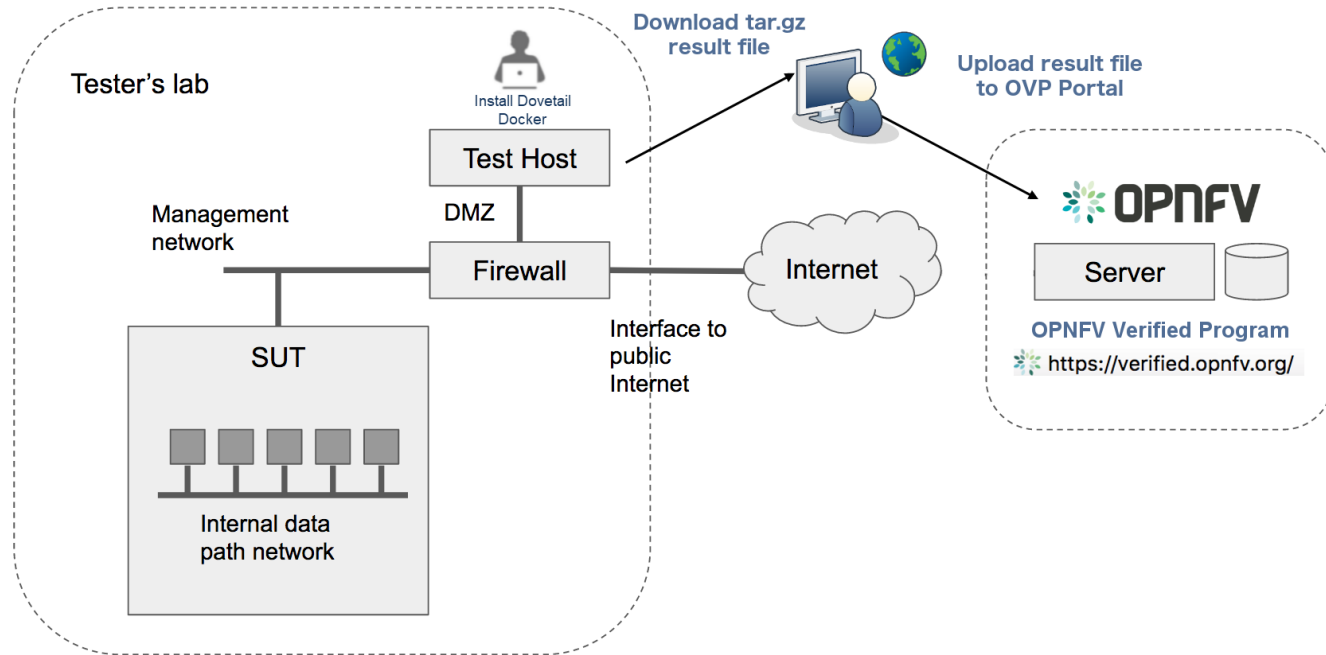




# Dovetail Test Execution



# Topology of Test Infrastructure



# OVP Web Portal



# OVP Web Portal



- <https://verified.opnfv.org>



The screenshot shows the OPNFV Verified Program website. The header features the OPNFV logo and the text "OPNFV Verified Program" on the left, and a "Sign In / Sign Up" link on the right. A left sidebar contains navigation links: "Governance & Workflow", "Overview", "Governance Guidelines", "Terms & Conditions", "Process Workflow", and "Participation Form". Below these are "Training Resources" and "Release Information". The main content area has a large heading: "OPNFV is offering an OPNFV Verified Program (OVP) that verifies products and services with the 'OPNFV Verified' mark." Below this is a badge for "Infrastructure" with the OPNFV Verified logo and the date "2018.01". To the right of the badge is a paragraph: "The OPNFV Verified program demonstrates the readiness and availability of commercial products based on OPNFV. Verified products and services submitted by vendors and service providers become compliant by implementing explicitly defined interfaces, behaviors and key features while".

# Compliance Verification Workflow



1. Submission of participation form
2. Testing
3. Submission of results
4. Notification of reviewers
5. Community review of test results
6. Grant of use of program marks





- Demo time!

# Evolution of OVP



# Linux Foundation Networking



- Umbrella project covering 6 networking projects

- Compliance programs

Linux Foundation Networking



program label





# References



- OPNFV Verified Portal
  - <https://verified.opnfv.org>
- Dovetail project
  - <https://wiki.opnfv.org/display/dovetail>
  - #opnfv-dovetail on Freenode
- OPNFV
  - <https://www.opnfv.org/>