OVP 2.0 Boot Strap

All members are encouraged to contribute directly into this working draft. See also the OVP 2.0 Technical Ideas page

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Charter

The LFN OPNFV Verification Program Phase 2 (OVP 2.0) is an open source, community-led compliance and verification program to promote, enable, and evolve a thriving ecosystem of cloud-native telecoms where Cloud Native Network Functions (CNFs) from different vendors can inter-operate and run on the same immutable infrastructure. It includes CNF compliance and verification testing based on requirements and best practices put forth by both the CNCF and CNTT. These requirements feed tool-sets and testing scripts developed within OPNFV, ONAP and CNCF communities.

Vision

An end to end set of compliance/conformance tests and testing toolchain for independently verified Cloud Native Functions for use in Telco environments.

Who are participating?

Linux Foundation Networking

- Open NFVI project (OPNFV)
- Open Networking Automation Project (ONAP)
- Compliance and Verification Committee (CVC)

Common NFVI Telco Taskforce (CNTT)
• Reference Architecture 2 workstream (RA2)
• Reference Implementation 2 workstream (RI2)

Cloud Native Computing Foundation (CNCF)
• Telecom User Group (TUG)

5G Cloud Native Network Demo (Brandon Wick)
• Community Page

How to engage
1. Join the mailing list: https://lists.opnfv.org/g/OVP-p2
2. Subscribe to the calendar for the meetings: https://lists.opnfv.org/g/OVP-p2/ics/7337234/1823902251/feed.ics
3. Engage in the discussions at the weekly meetings
4. Share your ideas on these wiki pages and comment sections at the bottom of every page

What is the Minimum Viable Program

The end state vision is spelled out above and since it is likely a multi-year endeavor, what can we do this year to chart the direction and set in motion the program that achieves the vision?

First, the envisioned process is diagrammed below:

E2E CNF Conformance Cycle

In the below diagram the “?” indicate processes that need definition and refinement for the differing execution environment of OVP Phase 2.

Categories of Conformance:
• A. Cloud Platform Conformance
  • A1. Functional:
• B. CNF Conformance
  • B1. Artifacts:
  • B2. Functional:
  • B3. Performance:
• C. Cloud Platform Benchmarking
MVP proposal

Not every thing can be tackled in the MVP, here are two elements that can be tackled for MVP.

- A1: Cloud Platform Conformance (may be partial)
- B1 & B2: CNF Compliance

What needs to happen/Decided on:

- Decide on Tooling:
  - Cloud installation tools into a given lab.
  - Basic Testing Tools.
  - what open source project is responsible of this.

- Decide on Lab:
  - Community development resource access
  - Platform details - specific HW details, login info, etc.
  - what open source project is responsible of this.

- Decide on Badging Process:
  - Test results review process
  - Portal and badging process

- Decide on OpenSource Testing Projects
  - What project will deliver what test category (A, B, and C)
    - A: ?
    - B: ?
    - C: ?

Workstreams Proposal (see OVP 2.0 Workstreams)

- WS02: Definition Requirements Activities (CNTT/ONAP/SDOs) [Primary Owner: CNTT] Bill Mulligan Trevor Lovett Ryan Hallahan Olivier Smith Fernando Oliveira
- WS03: Lab and tooling [Primary Owner ONAP+OPNFV+CNCF] Frederick Kautz Kanagaraj Manickam Trevor Cooper Ryan Hallahan
- WS04: A. Category Testing (not essential for MVP) [Primary Owner: XX]
- WS05: B. Category Testing [Primary Owner ONAP] Kanagaraj Manickam Ryan Hallahan Trevor Lovett
- WS06: C. Category Testing [Primary Owner CNCF Taylor Carpenter] Olivier Smith Trevor Lovett
- WS07: ONAP POC and existing development work [Primary Owner ONAP] Catherine Lefevre Amar Kapadia Seshu Kumar M Ranny Halby Srinivasa Addepali Fernando Oliveira Byung-Woo Jun

MVP Roadmap - NEEDS COMMUNITY REVIEW/UPDATE

- Define MVP - by April 1
- Validate approach with partners (CNTT, CNCF, LFN projects) - during weekly OVP p2 meetings <ADD LINK>
- Implement “HelloWorld” sampleCNF test - Hackfest at June Developer and Testing Forum
- Implement MVP - by Q1/Q2 2021

Immediate tasks and Als:

1. Identify cloud infrastructure installation tools.
2. Identify Labs for testing and human resources who will manage the labs (in addition to the testers)
3. Identify projects to develop test scripts and tools to perform Cloud infrastructure functional testing and agree on scope.
4. Agree on scope of CNF Onboarding testing.
5. Identify projects to develop test scripts and tools to perform CNF testing and agree on scope.
6. Agree on CVC portal.

OLD: Workstreams Proposal

Development/Lab environment [Primary Owner OPNFV+CNTT] - What are the lab resources for hosting configurations for developing the NVFI and running on-going CI/CD verification tests? How can a “Lab as a Service” (LaaS) be instantiated for CNF/NFVI testing, development, and validation efforts? Does the CNCF TestBed meet the needs?

Test Tooling/Test Suite Development Based on Above Categories [Primary Owner: OPNFV]: Understand dependencies and what can be parallel processed. Also, what is the overall program test framework (e.g., Dovetail or something similar) that can plug in tests from projects and communities….

- On-boarding/Lifecycle Management testing - What are the preferred tools/methodologies for repeatably creating an NFVI environment supporting containers? Can CNFs be deployed and respond to basic lifecycle events?
- Platform test - What is the source for the tests and toolchains for developing and verifying the NFVI platform for container based CNFs? Are there existing CNCF infrastructure tests/standards that should be co-opted? What level of micro-services should be integrated into the standard platform? How do we validate each of the micro-services against a specific version of the platform?
- **CNF test** - What is the source for the tests and toolchains for developing and verifying the CNFs as the SUT atop a verified NFVI? How does the CNCF test bed integrate into the OVPp2 workflow and test process? With many micro-services as “helper functions”, how do we validate each of the micro-services against a specific version of the CNF?

- **Performance testing** - Both the infrastructure and CNF performance characterization would be useful - this is very difficult to cooperatively define/execute (DEFER)

**CVC portal [Primary Owner: CVC]** - Define the UI for consumers of the CVC and on-ramp for producers of NFVIs and CNFs to publish their successful validation process results? How to the CNF compliance tests (CNCF) figure into the telco focused OVPp2 process?

**Governance/Structure/Mktg Framework [Primary Owner: CVC]** - Includes 3rd party labs, white papers, slide decks. With input from MAC