OPNFV

A New Release Process

Please direct any questions to info@opnfv.org

LINUX FOUNDATION
COLLABORATIVE PROJECTS

Introduction

- The purpose of this document is to propose a new OPNFV release process that aligns with the goals and principles approved by the TSC in 2018.

Project Tags and Releases vs OPNFV Releases

- One of the goals of the new release process is to enable projects to make their own releases, between major OPNFV releases, as often as they see fit.
  - Projects releases may occur when projects meet the release criteria identified in their release plan.
  - For each OPNFV release cycle, each project participating in the release will select a project level release as an OPNFV release candidate.
  - OPNFV releases will be distinguished from project releases in each repo by the use of the “opnfv” prefix to the release number.

Lifecycle Update Proposal

- New projects often participate in releases without having completed much work.
  - At the same time, it’s recognized that new projects need time to develop.
  - One solution to this would be to add a new lifecycle stage, “Sandbox”, which would be the default for all new projects.
  - Projects in the “Sandbox” stage would not participate in releases.
  - Once the project demonstrates meaningful progress (e.g., code, documentation, etc.) then the project may request that the TSC promote the project to “Incubation”, following a review.
  - This would incentivize new projects to produce results, as well as reduce the number of projects that joint the release process, but fail to produce significant work.

Milestones

- New process development principles
  - Keep milestones and requirements simple, initially
  - Iterate and add detail as needed, as we gain experience with the new process and tooling
  - Lots of balls in the air, so we need to learn to live with a level of uncertainty and ambiguity, while following an ethos of continuous improvement.

Milestones

- MS 0 (t – 6 mo) – Start of OPNFV Release
- MS 1 (t – 5 mo) – Project Release Plan
- MS 2 (t – 2 mo) – Preliminary Project Readiness Review
- MS 3 (t – 1 wk) – Final Project Readiness Review
- MS 4 (t) – Project Tag for OPNFV Release

MS 1 – Project Release Plan

- Indicates intent-to-participate in OPNFV release
- Includes the following information:
  - Declaration of project type (see defs later in this presentation)
  - List of JIRA tasks, bugs, and features to be addressed in the release.
  - List of release artifacts
  - Clearly defined release criteria.
  - Test plan for evaluating the functionality and performance of the project, including new features and bug fixes.
    - Plan should also address how test results will be shared (e.g., dashboard, log files, etc.)

MS 2 – Preliminary Project Readiness Review

- Project provides a tag along with supporting evidence for the following.
- Project must show substantial progress toward objectives documented in release plan.
  - JIRA should be up to date and reflect current progress.
- Preliminary documentation must be in place
  - At a minimum, directory structure and placeholder documents
- Exceptions may be taken up with the TSC through the exception process

MS 3 – Final Project Readiness Review

- Project provides a tag along with supporting evidence for the following.
- Project must show that all project objectives have been completed, as outlined in the project release plan.
  - JIRA should be up to date and reflect current progress.
- Final documentation must be in place
- Exceptions may be taken up with the TSC through the exception process

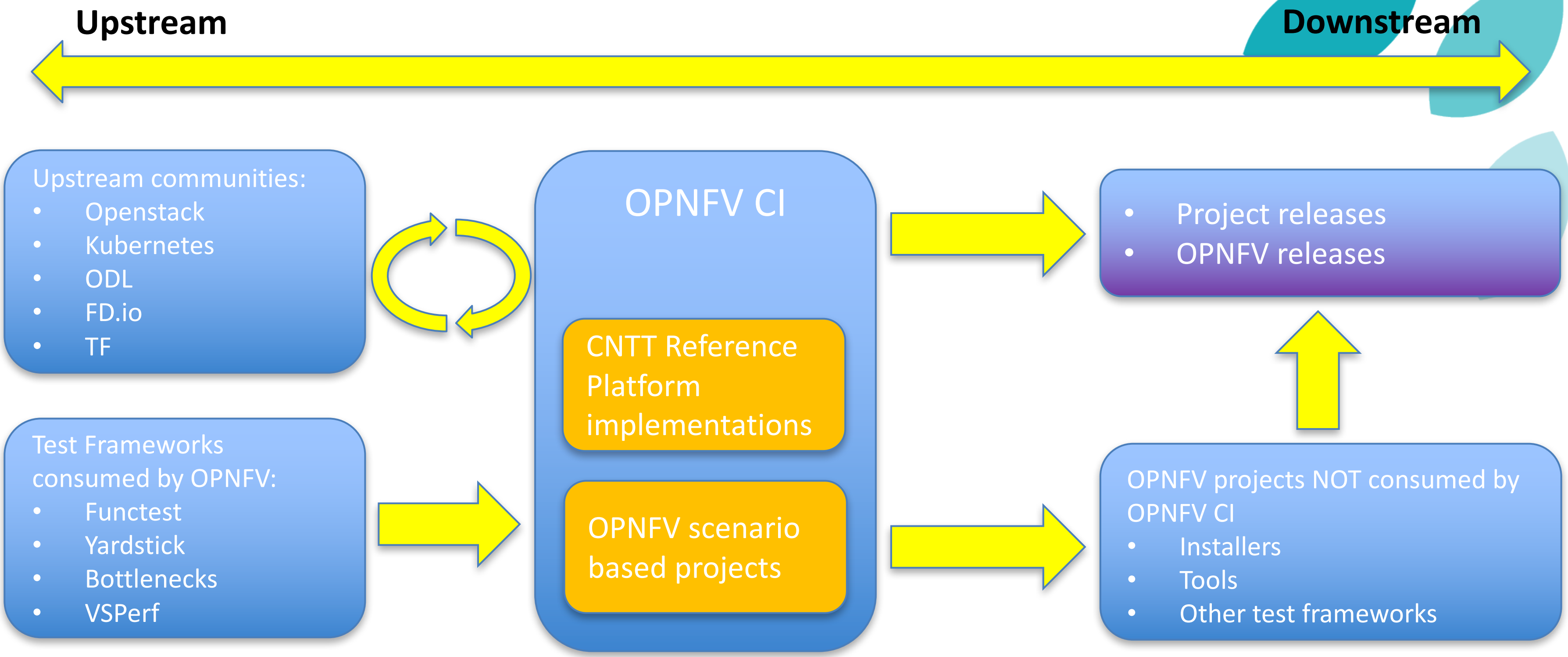
Common Reference

- In order for scenario based projects to validate themselves with OPNFV test frameworks, we require one or more common references (e.g. GSMA specifications, feature specific references, etc.)
- The common references should be a community consensus, via the TSC, rather than imposed by a particular project.
- If we can’t agree on common references, then we’re likely to have conflict (a.k.a., “it works on my system”)

Application to different project types

- One of the weaknesses of the current process is that it doesn’t account for non-scenario projects very well.
- One of the principles that the TSC agreed to in 2018 was that the new process should support different types of projects
- For the purpose of the release process, five project types are defined:
  - Scenario-based projects
  - Test frameworks consumed by OPNFV
  - Non-scenario projects NOT consumed by OPNFV
  - Documentation only projects
  - Support and infra related projects

OPNFV Projects Relationship to CI



Upstream

Downstream

Upstream communities:

- Openstack
- Kubernetes
- ODL
- FD.io
- TF

Test Frameworks consumed by OPNFV:

- Functest
- Yardstick
- Bottlenecks
- VSPerf

OPNFV CI

CNTT Reference Platform implementations

OPNFV scenario based projects

- Project releases
- OPNFV releases

OPNFV projects NOT consumed by OPNFV CI

- Installers
- Tools
- Other test frameworks

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Scenario-Based Projects

- Scenario based projects will propose one or more scenarios that will be continuously deployed and tested in CI.
- Scenarios will be subject to two or more requirements gates in CI.
  - The TSC will determine the number of gates and the requirements for each gate, possibly through a recommendation by the TWG.
  - Test requirements will consist of a base set of common requirements determined by the TSC, plus feature-specific requirements determined by the project.
  - When a scenario passes a gate it gets ”promoted”
  - Only scenarios passing the final gate will be eligible for a project release or an OPNFV release.
  - Scenario status will be available via a dashboard

Test Framework Projects Consumed by OPNFV

- Test framework projects consumed by OPNFV (i.e., used by OPNFV CI to test or otherwise operate on other OPNFV projects) will provide a validated version of their projects to OPNFV CI
- Test cases enabled in CI will comply with TSC established test requirements.
- Updates to test frameworks will be re-validated against the common references before they are applied to CI.
- Release criteria is dependent on passing self-validation, including unit tests, and validation against the state of the reference platform(s) at the time of the release.

Projects not consumed by OPNFV CI

- Projects with executable code that are not dependencies of scenario-based projects (e.g. functional, test, etc.)
  - Some test frameworks
  - Tools
  - Installers
- These projects should consume the output of the OPNFV CI process (see diagram)
- Release criteria is dependent on passing test plan defined in the project release plan. Must be publicly visible via dashboard or some other means.

Infra and Support Projects

- Projects that provide infrastructure or a supporting function to all OPNFV projects
  - OPNFVDOCS
  - Pharos
  - Releng
- These projects manage their own releases and are not subject to OPNFV release processes, except to the extent that they operationally and functionally support them.

Documentation only projects

- No executable code, just documentation
  - White papers
  - Proposals
  - Specifications
- Only release criteria is to have completed documentation that complies with OPNFVDOCS structure and configuration requirements.

Questions / Open Issues

- How are project releases supported by OPNFV?
  - Download page?
  - Promotion?
  - What is the process for projects making independent releases?
- What about branching?
- How do we reach consensus on common reference platforms?
- How will the TSC determine common gate and test requirements?
- Is it feasible and/or useful for projects not consumed by OPNFV to work downstream of the CI process (e.g. Fuel, NFVBench)
- How will CNTT and GSMA interaction with OPNFV affect the process?
- How will we support maintenance releases? Do we have sufficient capacity?

Tasks

- Get feedback and buy-in from process stakeholders (TSC, PTLs)
- Produce detailed, project type-specific, checklists for preliminary and final reviews (MS 2 and 3)
- Decide on initial gates and test requirements for scenario-based projects
- Determine process for reaching consensus on common references
- Develop plan for acting on CNTT/GSMA input on reference platforms when they become available (Aug/Sept ?)

Questions?

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