

TSC Task Force on CD based Release Process

Why do we need a different process?

- OPNFV serves different audiences, for example
 - Developers working with (typically multiple) upstream projects, using OPNFV as an E2E integration and test environment
 - Developers using OPNFV as a standard/example/reference platform
 - Test new hardware platforms
 - Test VNFs
 - Test MANO
 - Service providers who want to test and benchmark different hardware
 - For more detail, see [User stories for OPNFV release artifacts](#)
- Current process does not address the needs of some of the target audience

Goals for release process

- Serve different audiences requiring a different trade-off between recent/stable out of the same process (e.g. "Developers" and "End Users")
- Individual OPNFV projects can make “micro-releases” at any time
- Keep the ability to make an “umbrella release” of the OPNFV reference platform at least two times a year (and maybe more often), but keep the burden on projects as low as possible (through automation)
 - For the purpose of this goal, reference platform is defined as the set of OPNFV scenarios that choose to participate in such a release
- Repeatable deployments: Every installation run of an OPNFV stack should produce the same end result
- Clearly identifiable and documented versions of upstream dependencies

High-level principle

- Each project produces a series of artifacts
 - An artifact is by definition immutable, i.e. contains or points to fixed external dependencies and hence deployment results on same hardware are 100% repeatable
- At the beginning of each cycle, artifact promotion criteria are defined and documented
- When an artifact passes all promotion criteria, it is tagged and stored
- The project is then free to start its next development cycle

Some notes on the high-level principle

- Not yet a complete process definition, many details still need to be defined
- Can be applied to feature projects and test projects
 - Feature projects:
 - Artifact: installer + scenario
 - Promotion criterion: pass certain test cases
 - Test projects:
 - Artifact: test framework
 - Promotion criterion: tests pass on a “golden” platform version
- Promotion can happen in multiple stages, depending on user requirements, available test resources, etc.
- If used to define a two-level hierarchical process, our needs can be met

Hierarchical process

- The high-level principle can be used to define a hierarchical process for individual OPNFV project “micro-releases” and OPNFV “umbrella-release”
- OPNFV defines a release target date and invites scenarios to commit to be part of the “umbrella” release, which essentially means that projects commit to delivering a certain minimum quality by a certain deadline
- Umbrella process steps
 - Commit to participate
 - Define promotion criteria for “OPNFV release quality” (only applies to scenarios, what about test projects and installers?)
 - OPNFV defines common minimum criteria for each scenario
 - Each project defines additional scenario-specific criteria
- A more detailed proposal on how the process could look in the future is described in <https://etherpad.opnfv.org/p/release-process2.0>

Proposal

- Agree on the high-level principle and the intention to use it in a two-level hierarchical process (with details tbd)
- Use this agreement as a foundation for developing a new release process
- Create a **release process working group**, with representation from all relevant stakeholder groups, tasked to develop the new OPNFV release process

Parking lot for questions

- Do we have to define the promotion stages and if so, is it mandatory for projects to use all of them? Is it feasible/desired to leave freedom to projects?
 - E.g. submit gate, merge gate, daily, weekly
- Define the role of installers and test frameworks
 - For example: Installers provide a “base system” (os-nosdn-nofeature and k8s-nofeature) and an integration framework for feature projects
 - Test frameworks...
- Do we want to create & maintain a “community-owned” installer?