OSM Development Workflow

Developers
Commit code, new features
Feedback
Gerrit (Code Review)
Feedback Code Review (+2/-2)
Submit
Verify (+1/-1)
Jenkins (Build & Test)
Submit
Git (Code Repo)

Users
Bugs, questions

Module Leads

Bugzilla (Bug Tracker)

Rel THREE
Rel FOUR

Build, Test and Store

(Artifact Storage)
Several Modules => Multiple pipelines

UI-CLI

IM-NBI

SO

N2VC

VCA

RO

MON

Dev Ops

GUI

CLI Client

IM

NBI (Models)*

Test Framework & scripts

VNFD & Charms

Installers

VIM-EMU

Monitoring

Monitoring plugins

SO-RO Interface

SO-VCA Interface

IM-NBI

VIM-EMU

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OSM CI/CD Pipeline – Code Commit

Developer

Code Commit

Stage 1

Trigger per-module pipelines

Scan

UTest

Build

Archive

Verified: +1

Stage 2

Scan

UTest

Build

Archive

Stage 3

Smoke Tests

System Install

Artifact Storage
CI/CD Stage 1: Launch

- Triggered by Gerrit upon code commit (or patch set submit)
- Launch multi-branch pipelines
- Call Stage 2 and build required modules
CI/CD Stage 2: Per-module pipeline

- Triggered by Stage 1, on specific modules
- Operates within a Docker container
- Per-module call backs:
  1. License Scan (FOSSology)
  2. Unit Test
  3. Package build
  4. Artifact creation & storage (Artifactory-Pro)
CI/CD Stage 3: System Integration

- System Install from binaries
  - From Stage 2 & Artifact Storage
- Smoke Tests
  - Based on pytest fixtures
  - No NFV Infrastructure, Virtual Infrastructure Manager (VIM), SDN Controller ..
  - API checks, VNFD, NSD upload, ...
  - Leveraging OSM Client library
  - Basic testing can be extended with VIM-EMU
CI/CD Pipeline – Patch Set Submit

Module Leads

Submit

Stage 1

Trigger per-module pipelines

Stage 2

Scan

U Test

Build

Archive

Stage 3

Scan

U Test

Build

Archive

Stage 4

System Tests

Smoke Tests

System Install

NFVI & VIM

VNF

artifactory

Artifact Storage

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Stage 4: System Testing OSM

• System test challenges:
  • System testing OSM requires access to NFVI & VIMs to be orchestrated
  • High interoperability means also many possible combinations of:
    • NFV Infrastructure
    • VIMs and SDN Controllers
    • VNFs
    .... that need to be tested
OSM Remote Labs

OSM Servers at ETSI

HIVE: Hub for Interoperability and Validation at ETSI

Large and diverse OSM Community

OSM Remote Labs network
Stage 4 on OSM Remote Labs

- Automated System and Interop Testing
- Multi-site, multi-Vim and multi-SDN
- As Stage 4 of the Submit pipeline or stand alone regular job
OSM Remote Labs at NFV Plugtests
OSM Remote Labs for Hackfests
Thank you!

OSM Remote Labs for Hackfests