ONAP Testing – introduction to ONAP SDK

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Why a Python SDK ?

Because it is very useful...

- to create tests
- to automate tests
- to easily interact & perform quick checks on ONAP

Model : OpenStack Python SDK

Another CLI ?

- A Java based CLI already exists and is used by a test framework through system calls written in python…
- Bunch of python files created by integration project (https://git.onap.org/testsuite/python-testing-utils/tree) for use cases dealing with robot (not defined as a python SDK),
- SDK in different langages should not be a problem...

A bit of history : from onap-tests

- Since Casablanca some tests are performed using onap-tests (https://gitlab.com/Orange-OpenSource/lfn/onap/onap-tests)
  - Basic python ~SDK + test tool published under Apache v2 on gitlab.com
  - Used in Gating and CI Daily chains to perform end to end tests
  - Developed mainly by Orange with contributions from Exfo and DT
  - Used by third party to onboard/instantiate their VNFs based on their heat template

...to onap-pythonsdk

- But the code quality was relatively poor
  - Poor unit test coverage
  - Poor functional test coverage
  - Lots of copy/paste
  - Poor object-oriented conception
  - Mix SDK (call the API) and the tests
- Decision was taken to heavily refactor onap-tests during Summer 2019 => python-onapsdk

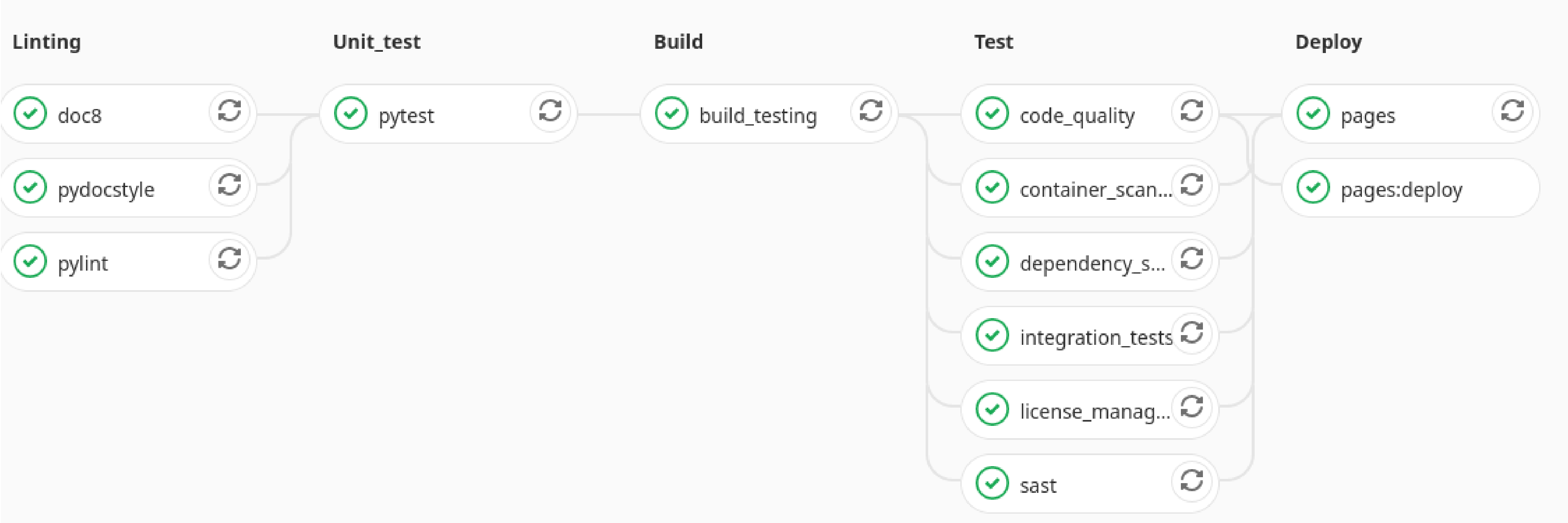
onap-pythonsdk

- Only SDK (still need an onap-tests aside to perform the tests by consuming onap-pythonsdk)
- Higher expectations in term of quality
  - Integrated documentation
  - 100% pylint
  - 100 % test coverage
  - Functional tests (with emulators)
  - Better conception (object oriented) for a better maintanability
  - Security scanning
  - License checking
  - Dependency checks
  - Available as a python package : pip install onap-pythonsdk

onap-pythonsdk

- Apache v2 hosted in gitlab.com (could be migrated to LF if needed)

  https://gitlab.com/Orange-OpenSource/lfn/onap/python-onapsdk



Status

- Onboarding : 90 %
- Instantiation (GR-API) : 70 %

```
>>> from onapsdk.vendor import Vendor
>>> vendor = Vendor(name="toto")
>>> vendor.onboard()
>>> from onapsdk.vsp import Vsp
>>> vsp = Vsp(name="morganVSP", vendor=toto, package=open('/tmp/ubuntu16.zip','rb'))
>>> vsp.onboard()
>>> from onapsdk.vf import Vf
>>> vf = Vf(name="morganVF",vsp=vsp)
>>> vf.onboard()
>>> from onapsdk.service import Service
>>> service = Service(name="morganService", resources=[vf])
>>> service.onboard()
>>> service.get_tosca()
>>> from onapsdk.ns import NetworkService
>>> ns = NetworkService(name="morganNetworkService", '/tmp/tosca_files/service-X-template.yml')
>>> ns.instantiate()
```

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Thank you!