ONAP VNF Certification

- LFN C&V - Sets policy on certification schemes
  - e.g. Qualified Lab Program requirements
  - Builds on OPNFV Dovetail framework
- ONAP TSC controls ONAP specific certifications
- ONAP Projects on VNFs
  - VNFRQTS (VNF Requirements - Documentation)
    - VNF Guidelines
    - VNF Requirements
      - 789 numbered requirements in Casablanca
      - Of which 634 are MUST/MUST NOT
    - VNF Test Case Descriptions
    - VNF Package Inspection
    - VNF Provider Use Case
  - Modelling
    - VNFD
  - VNFSDK
    - TOSCA tests
    - 11 Requirements in Casablanca
    - 6 Tests in Casablanca
  - VVP
    - HEAT tests
    - 298 Requirements In Casablanca
    - 180 tests in Casablanca

Certification based on VNF Requirements, expand VNFRQTS scope
ONAP VNF Certification

- Requirements evolve with each ONAP release
  - Feature alignment with ONAP platform evolution
  - Bug fixes
  - Reword for clarity / testability
- Not all requirements easily machine testable
  - Tests not yet written
    - Only Test Case Descriptions for VNF package Inspection in Casablanca
  - Resources need for testing
  - Documentation, process requirements etc. not intended for machine consumption
    - Human Response required (e.g. radio buttons, URLs)
- VNF Certification bar to raise over time
ONAP VNF Certification

• Several Major Options in VNF features required by ONAP
  • Where VNF needs only support one option
  • Lots of subsidiary requirements in that option
  • VNF unlikely to implement multiple options (substantial functionality cost)
  • Option likely long lived (would take >2 ONAP releases to converge)

• Major options identified:
  • VNF Package – HEAT / TOSCA / HELM (+ documentation, preload, etc)
  • Management Interfaces – VFC / Netconf/ Ansible / Chef
  • Life Cycle Operations – SDNC/APPC, VFC, ETSI (SOL003)

• **BUT** – VNF Certification should
  • have *Specific* meaning / *Assurance* of quality

ONAP needs more than one VNF Certification
ONAP VNF Certification

Recommendations

• Start Simply
  • Build on existing test suites first

• Unified LFN portal view
  • Start with VNF Package Inspection testing and VNF Documentation (radio buttons/ URLs);
  • allow for other testing badges to be added in future

• Separate logos/ badges for major options: Initial set :
  • VNF Documentation
  • VNF HEAT Package
  • VNF TOSCA CSAR Package

• Dublin release Impact:
  • Project Impacts: VNFRQTS/ VNFSDK/ VVP/ INT
  • Test script updates / additions
  • Integration of test invocation tools with Dovetail
  • Integration of VNF testing with ONAP CI/CD processes.
  • LFN/ONAP website establishment and process governance docs
  • Prototype proposal – OPNFV Plugfest Paris - Jan 2019

Certifications to launch with Dublin
ONAP VNF Certification

Recommendations

• Certifications should be based on requirements
• TSC already overloaded
• Already too many committees, projects, call
  • – expand scope of existing project
• VNFRQTS already coordinates with
  • Modelling on VNFD
  • VNFSDK, VVP on VNF Testing

ONAP TSC to refer VNF Certification discussions to VNFRQTS
ONAP VNF Certification

• Unified Front End for VNF Certification
  • Build on OPNFV Dovetail Framework
  • LFN hosted website
  • Public view
  • Private VNF provider view

Submit results button
List of review
# ONAP VNF Certification

## ONAP VNFs

### Public Summary view

<table>
<thead>
<tr>
<th>Company</th>
<th>Product</th>
<th>Category</th>
<th>Version</th>
<th>Documentation Badge</th>
<th>HEAT Badge</th>
<th>CSAR Badge</th>
<th>Life Cycle Badge</th>
<th>Functional Badge</th>
<th>Performance Badge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y, LLC.</td>
<td>Y’s Bestest</td>
<td>vFW</td>
<td>Black Hawk</td>
<td>2019-10-30</td>
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<td>2019-10-30</td>
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<td>Z, SPA</td>
<td>Gizmo#1</td>
<td>vEPC</td>
<td>sku123Z</td>
<td>2019-08-15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

> hyperlink to evidence files / Vendor sites / ..

> possibility to filter by column to know
> - all the VNF of a vendors
> - all the vIMS
> - all the HEAT packaged badge VNFs
> - ....
ONAP VNF Certification

VNF Documentation Badge
- Radio buttons and URLs
- Build on CII badge website as an example
- ~33 requirements for VNF documentation in Casablanca

VNF Docs Badge
2019.05
ONAP VNF Certification

• VNF HEAT Badge
  • Based on VVP validation test scripts
  • ~298 requirements for HEAT in Casablanca
  • ~190 tests implemented in Casablanca

Validation Report

Profile: ONAP
Tool Version: 0.12.0
Directory Validated: C:\Users\92972\work\vnf-validation-tool-all\regression_tests\heat_templates\stark_template2
Checksum: 68aad3b69665db8566e0b0d561134
Total Failures: 1

No validation errors found.

Validation Failures

Nova Server name, flavor, and image use get_params. Ensure that the OS_name, Server properties for name, flavor, and image only use the get_params function. To do so, (1) locate any OS: Nova Server resource - Ensure that the properties name, flavor, and image do not use any function other than get_param.

File(s) | Error Message | Requirement(s) | Resolution Steps
--- | --- | --- | ---
| stark.yaml |  |  |  |
ONAP VNF Certification

• VNF CSAR Badge
  • Based on VNFSDK validation test scripts
  • ~11 requirements for TOSCA in Casablanca
  • ~6 tests implemented in Casablanca
Use Cases for invocation of test scripts

a) User {VNF Provider, ONAP Operator} *invokes test scripts locally* to validate a VNF package so that errors can be resolved locally before submission to larger mechanized processes.
   • Stand alone tool
b) LF ONAP Project or ONAP Operator use *automated invocation of test scripts as part of CI/CD tool chain* for regression testing
   • Linter
c) LFN/ONAP Maintains *public website to invoke tests or upload test results* and consolidate results from multiple test sources so that industry has a consolidated view of certified VNFs
   a) VVP Web/VNFSDK-VTP
d) ONAP operator maintains an *internal website to invoke tests and consolidate results unique to their environment*, so that any discrepancies from (c) can be resolved.
   a) VVP Web/VNFSDK – VTP