

- e.g. Qualified Lab Program requirements
- Builds on OPNFV Dovetail framework
- ONAP TSC controls ONAP specific certifications
- ONAP Projects on VNFs

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- 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



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	Docs » VNF Requirements and Guidelines	View page south the second s
OPEN NETWORK AUTOMATION PLATE casablanca	VNF Requirements and Guidelines	5
Search docs	The following includes guides and requirements are provided to properly set up an xNF for ONAP usage.	describe tasks that an xNF provider of ONAP may need to
Casablanca Release Notes Developer Guides User Guides VNF Requirements and Guidelines VNF Requirements Documentation VNF Test Case Descriptions VNF Provider Use Cases VNF Validation Documentation	 VNF Guidelines 1. VNF/PNF Guidelines VNF Requirements Documentation 1. Purpose 2. Scope 3. Introduction 4. VNF Development Requirements 5. VNF Modeling Requirements 6. Infrastructure Requirements 7. ONAP Management Requirements 8. Appendix 9. Requirement List VNF Test Case Descriptions 1. VNF Package Test Cases 2. Appendix VNF Provider Use Cases Manual Scale Out Use Case VNF Validation Documentation VVNF Validation Documentation 	
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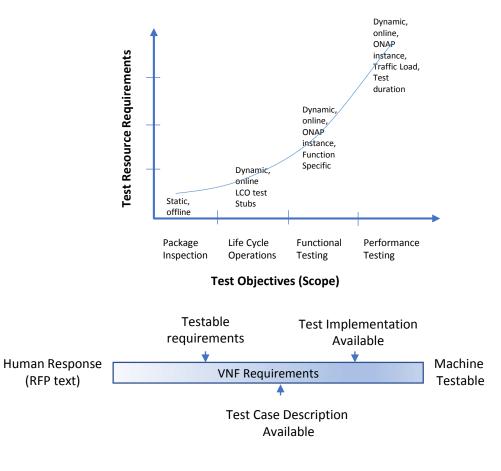
Certification based on VNF Requirements





- 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







- 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

Too many options in ONAP for only one 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



• Unified Front End for VNF Certification

- Build on OPNFV Dovetail Framework
- LFN hosted website
- Public view
- Private VNF provider view



OPNFV	OPNFV Verified Program			My Results Profile
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VEPC

Y, LLC.

Z, SPA

- all the HEAT packaged badge VNFs

possibility to filter by column to know

2019-10-30





VNF Documentation Badge

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

V Basics	0/8 ●
What is the human-readable name	of the VNF?
What is a brief description of the V	NF?
What is the URL for the VNF ?	
	scribe what the software does (what problem does it solve?).
What license(s) is the VNF released	under?
	rence documentation that describes the external interface (both input and output unmet)



ORAFT **ONAP VNF Certification**

• VNF HEAT Badge

- Based on VVP validation test scripts ٠
- ~298 requirements for HEAT in Casablanca ٠
- ~190 tests implemented in Casablanca ٠



Validation Report

- · Profile: ONAP
- · Tool Version: 0.12.0
- Directory Validated: C:\Users\II2972\work\vnf-validation-tool-att/regression_tests\heat_templates\stark_template2
- Checksum: fe6a6ae89665dfb8566e8bf9df551134
- Generated: 2018-12-05 15:11:33.594000 Central Standard Time
- . Total Failures: 0

No validation errors found.

Validation Report

- · Profile: ONAP
- Tool Version: 0.12.0
- Directory Validated: C:\Users\tl2972\work\vnf-validation-tool-att\regression_tests\heat_templates\stark_template2
- Checksum: eeee6f6d631136d8f9f01b084f7b159a
- Generated: 2018-12-05 15 16 06 796000 Central Standard Time
- Total Failures: 1



Validation Failures

CSV PDF Print			Search:
File(s)	Error Message	Requirement(s)	Resolution Steps
stark_base.yaml	Failed: test_nova_servers_vm_types_use_get_param These OS::Nova::Server resources do not derive one or more of their name, flavor, image properties via get_param: STARKD B_server_0 Full Details	R-901331: The VNF's Heat Orchestration Template's Resource os::Nova::Server property image value MUST be be obtained via a get_param. R-481670: The VNF's Heat Orchestration Template's Resource os::Nova::Server property flavor value MUST be be obtained via a get_param. R-663631: The VNF's Heat Orchestration Template's Resource os::Nova::Server property name value MUST be be obtained via a get_param.	Nova Server name, flavor, and image use get_param: Ensure that the OS::Nova::Server properties for name, flavor, and image only use the get_param 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.





• 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