



The Standards People

CNF Test Analysis

- An initial comparison between NFV-EVE011 and CNCF
CNF Test Suite

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Introduction of NFV-EVE011



- ETSI NFV has started a work back in 2017, to specify a set of non-functional parameters to classify and characterize cloud-native VNFs
- The result is NFV-EVE011 (published in 2018):
https://docbox.etsi.org/ISG/NFV/Open/Publications_pdf/Specs-Reports/NFV-EVE%20011v3.1.1%20-%20GS%20-%20Cloud%20Native%20VNF%20Classification%20Spec.pdf
- The non-functional parameters include: resiliency, scaling, composition, location independence, state handling, published APIs, management, containerization, load balancing.
- The purpose of the present analysis is to identify the gaps, and provide inputs to CNF test suite for developing additional test cases to cover the requirements as defined in EVE011

Initial comparison analysis



CNF test suite	EVE011 parameter	Comment
Compatibility Tests	Containerization (5.8)	Tests cover compatibility to K8S, CNI
Statelessness Tests	State handling (5.5)	Similar requirement
Security Tests	--	Isolation and use of privileges not in scope of EVE011 (general NFV requirements)
Microservice Tests	Composition (5.3)	Similar requirements, but CNF test suite focus on CNF startup time and image size while EVE011 focus on lightweight APIs
Scalability Tests	Scaling (5.2)	Similar requirements
Configuration and Lifecycle tests	Management (5.7), Zero touch management (5.9)	Similar requirements EVE011 also requires the micro-services / VNFCs within a VNF can be managed independently
Observability Tests	--	not in scope of EVE011 (covered in other NFV documents)

Initial comparison analysis



CNF test suite	EVE011 parameter	Comment
Installable and Upgradeable	n/a	Tests are Helm specific, EVE011 covers upgrade in 5.7
Hardware Resources and Scheduling Tests	--	Portability issues covered in other NFV documents
Resiliency Tests	Resiliency	Similar requirements (EVE011 has more details)
--	Location independence	EVE011 requires the VNF can be deployed in different locations as long as resource and placement constraints are met
n/a	Published APIs	EVE011 prefers the VNF to support open APIs as defined in SDO, industry standards, or open source communities
--	Load balancing	EVE011 requires the VNF to describe whether an external load balancer/NFVI switch is needed

- EVE011 has defined some non-functional parameters which could be considered as an input for further CNF test suite development
- On the other hand, the CNF test suite includes several aspects that are not included in EVE011, e.g., security, observability, etc.
- For more details see <https://pad.etsi.org/p/EVE011-CNF>

Next steps:

- More detailed comparison on requirement level
- Propose additional tests