

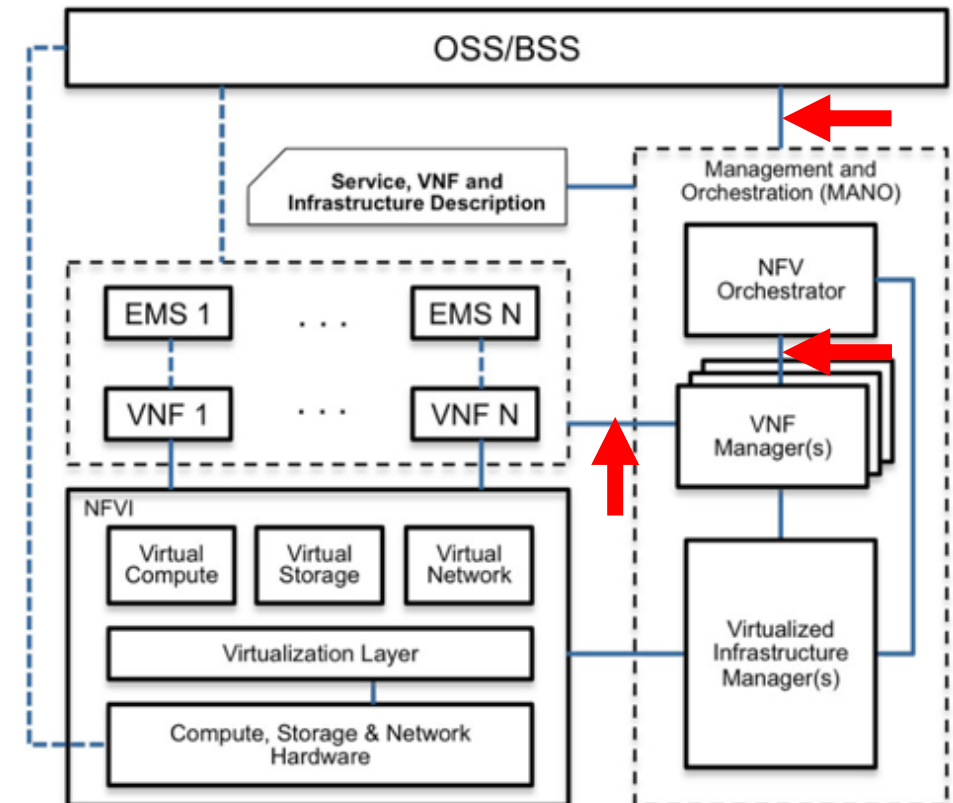
OLFN NETWORKING

Developer & Testing Forum 2020

MANO API Conformance Test Suite
Collaboration Opportunities

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- API Conformance Tests for 3 Reference Points:
 - SOL002
 - SOL003
 - SOL005
- TST Working Group
 - Testing, Experimentation, Open Source Collaboration
- STF – Specialist Task Force
 - Specialist engineers
 - Funded by ETSI
 - Guided by TST and Steering Group



- Results:
 - Document outlining overview and all test cases
 - Repo with automated test cases
- Robot
 - Open Source
 - Great community support
 - Wide adoption
 - Allowed specific requirements to be satisfied

ETSI GS NFV-TST010 V0.0.10 (2019-02)



**Network Function Virtualisation (NFV) Release 2;
Testing;
API Conformance Testing Specification
Release #2**

- Normal test ID, objectives, pre-conditions, etc
- HLC – High Level Code
 - To outline the test steps from a high level abstraction
 - Maps to low level code that executes the tests
- Table is imported automatically into document

6.3.1.1.1 Set a new VNF Configuration

Test Purpose	
Test ID	6.3.1.1.1
Test title	Set a new VNF Configuration
Test objective	The objective is to test the creation of a new VNF configuration and perform a JSON schema validation of the returned configuration data structure
Pre-conditions	A VNF instance is instantiated
Reference	section 9.4.2.3.4 - SOL002 v2.4.1
Config ID	<u>Config_prod_VE</u>
Applicability	The VNF supports the generation of HTTP <u>Etag</u> opaque identifiers
Post-Conditions	The configuration is successfully set in the VNF and it matches the issued configuration
Test Case	
Send VNF configuration Check HTTP Response Status Code Is 200 Check HTTP Response Header Contains <u>Etag</u> Check HTTP Response Body <u>Json</u> Schema Is <u>vnfConfigModifications</u> Check Postcondition VNF Is Configured	

- STF constructs test cases and validates them
- Marked in Forge (Gitlab) as ready for review
- TST WG reviews
 - Modifications made
- Merged into document
- Draft is prepared
 - Repo tagged to match draft version
 - Both are available to public

Objectives:

- **Robot Repo is the single source of truth**
- **Once TD makes it into document, no more changes**

- Approved
- Publication in a few weeks
- SOL documents version 2.4.1
- <https://forge.etsi.org/rep/nfv/api-tests>

- New SOL versions: 2.6.1, 2.7.1 and 3.3.1
- Release 3 features (new reference points SOL009, SOL011, and SOL012)
- Reference package (VNFD) development
- “Workflow test” enhancements
- Platform instrumentation for automation

- Subscribe to the Alarm Notification
- Simulate the fault on demand
- Test the appropriate notification

5.3.3.5.1 NS Fault Alarm Notification

Test Purpose	
Test ID	5.3.3.5.1
Test title	NS Fault Alarm Notification
Test objective	The objective is to test the dispatch of NS Fault Alarm Notification when a virtualised resource within an NS instance <u>fails, and</u> perform a JSON schema and content validation of the delivered notification. The action that triggers the notification under test is an explicit test step, but it is not performed by the test system.
Pre-conditions	A NS instance is instantiated, and a subscription for fault alarm notifications is available in the NFVO.
Reference	clause 8.4.6.3.1 - SOL005 v2.4.1
Config ID	<u>Config_prod_NFVO</u>
Applicability	none
Post-Conditions	none
Test Case	
Trigger the fault of a virtualised resource in the NS instance (external action) Check Alarm Notification Http POST Request Body Json Schema Is <u>alarmNotification</u> Check Alarm Notification Http POST Request Body <u>notificationType</u> attribute Is <u>alarmNotification</u>	

Note: Robot code can be found at <https://forge.etsi.org/rep/nfv/api-tests/raw/2.4.1/SOL005/NSFaultManagement-API/NotificationEndpoint.robot>

- Create new NS performance threshold
- Subscribe to the NS performance
- Simulate the performance threshold being crossed
- Test the notification

5.3.4.8.2 NS Threshold Crossed Notification

Test Purpose	
Test ID	5.3.4.8.2
Test title	NS Threshold Crossed Notification
Test objective	The objective is to test the dispatch of NS Threshold Crossed Notification when a previously set NS performance metric threshold is crossed, and perform a JSON schema and content validation of the delivered notification. The action that triggers the notification under test is an explicit test step, but it is not performed by the test system.
Pre-conditions	A NS performance job is created, and a threshold subscription is available in the NFVO.
Reference	clause 7.4.9.3.1 - SOL005 v2.4.1
Config ID	Config_prod_NFVO
Applicability	none
Post-Conditions	none

ETSI

Release #2

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Test Case
Trigger the cross of NS Performance Threshold (external action) Check Threshold Crossed Notification Http POST Request Body Json Schema Is ThresholdCrossedNotification Check Threshold Crossed Notification Http POST Request Body notificationType attribute Is ThresholdCrossedNotification

Note: Robot code can be found at <https://forge.etsi.org/rep/nfv/api-tests/raw/2.4.1/SOL005/NSPerformanceManagement-API/Notifications.robot>

- ETSI NFV Plugtest in June
 - MANO APIs test cases are always tested during a Plugtest with commercial packages
- OPNFV Plugfests/Hackfests