

# Functest Master

README.md (source from Functest)

## Functest

Network virtualization has dramatically modified our architectures which asks for more automation and powerful testing tools like Functest, a collection of state-of-the-art virtual infrastructure test suites, including automatic VNF testing (cf. [1]).

In context of OPNFV, Functest verifies any kind of OpenStack and Kubernetes deployments including production environments. It conforms to upstream rules and integrates smoothly lots of the test cases available in the opensource market. It includes about 3000+ functional tests and 3 hours upstream API and dataplane benchmarks. It's completed by Virtual Network Function deployments and testing (vIMS, vRouter and vEPC) to ensure that the platforms meet Network Functions Virtualization requirements. Raspberry PI is also supported to verify datacenters as the lowest cost (50 euros hardware and software included).

Functest releases	OpenStack releases
Jerma	Train
Kali	Ussuri
Leguer	Victoria
Wallaby	Wallaby
<b>Master</b>	<b>next Xena</b>

## Prepare your environment

cat env

```
DEPLOY_SCENARIO=XXX # if not os-nosdn-nofeature-noha scenario
NAMESERVER=XXX # if not 8.8.8.8
EXTERNAL_NETWORK=XXX # if not first network with router:external=True
DASHBOARD_URL=XXX # else tempest_horizon will be skipped
NEW_USER_ROLE=XXX # if not member
SDN_CONTROLLER_IP=XXX # if odl scenario
VOLUME_DEVICE_NAME=XXX # if not vdb
FLAVOR_EXTRA_SPECS=hw:mem_page_size:large # if fdio scenarios
```

cat openstack.creds

```
export OS_AUTH_URL=XXX
export OS_USER_DOMAIN_NAME=XXX
export OS_PROJECT_DOMAIN_NAME=XXX
export OS_USERNAME=XXX
export OS_PROJECT_NAME=XXX
export OS_PASSWORD=XXX
export OS_IDENTITY_API_VERSION=3
export OS_REGION_NAME=XXX
```

mkdir -p images && wget -q -O- [https://git.opnfv.org/functest/plain/functest/ci/download\\_images.sh](https://git.opnfv.org/functest/plain/functest/ci/download_images.sh) | sh -s -- images && ls -l images/\*

```
images/cirros-0.6.1-aarch64-disk.img
images/cirros-0.6.1-x86_64-disk.img
images/cloudify-docker-manager-community-19.01.24.tar
images/Fedora-Cloud-Base-30-1.2.x86_64.qcow2
images/shaker-image-1.3.0+stretch.qcow2
images/ubuntu-14.04-server-cloudimg-amd64-disk1.img
images/ubuntu-14.04-server-cloudimg-arm64-uefi1.img
images/ubuntu-16.04-server-cloudimg-amd64-disk1.img
images/vyos-1.1.8-amd64.qcow2
```

## Run healthcheck suite

```
sudo docker run --env-file env \  
-v $(pwd)/openstack.creds:/home/opnfv/functest/conf/env_file \  
-v $(pwd)/images:/home/opnfv/functest/images \  
opnfv/functest-healthcheck
```

TEST CASE	PROJECT	TIER	DURATION	RESULT
connection_check	functest	healthcheck	00:03	PASS
tenantnetwork1	functest	healthcheck	00:05	PASS
tenantnetwork2	functest	healthcheck	00:06	PASS
vmready1	functest	healthcheck	00:06	PASS
vmready2	functest	healthcheck	00:08	PASS
singlevm1	functest	healthcheck	00:32	PASS
singlevm2	functest	healthcheck	00:37	PASS
vping_ssh	functest	healthcheck	00:46	PASS
vping_userdata	functest	healthcheck	00:39	PASS
cinder_test	functest	healthcheck	01:05	PASS
tempest_smoke	functest	healthcheck	05:39	PASS
tempest_horizon	functest	healthcheck	01:05	PASS
odl	functest	healthcheck	00:00	SKIP

## Run smoke suite

```
sudo docker run --env-file env \  
-v $(pwd)/openstack.creds:/home/opnfv/functest/conf/env_file \  
-v $(pwd)/images:/home/opnfv/functest/images \  
opnfv/functest-smoke
```

TEST CASE	PROJECT	TIER	DURATION	RESULT
tempest_neutron	functest	smoke	15:30	PASS
tempest_cinder	functest	smoke	02:01	PASS
tempest_keystone	functest	smoke	01:17	PASS
tempest_heat	functest	smoke	22:14	PASS
tempest_telemetry	functest	smoke	00:00	SKIP
rally_sanity	functest	smoke	17:24	PASS
refstack_compute	functest	smoke	07:03	PASS
refstack_object	functest	smoke	02:09	PASS
refstack_platform	functest	smoke	07:31	PASS
tempest_full	functest	smoke	41:52	PASS
tempest_scenario	functest	smoke	08:42	PASS
tempest_slow	functest	smoke	43:42	PASS
patrole_admin	functest	smoke	21:06	PASS
patrole_member	functest	smoke	21:23	PASS
patrole_reader	functest	smoke	21:56	PASS
tempest_barbican	functest	smoke	02:30	PASS
tempest_octavia	functest	smoke	00:00	SKIP
tempest_cyborg	functest	smoke	00:00	SKIP

## Run smoke CNTT suite

```
sudo docker run --env-file env \
-v $(pwd)/openstack.creds:/home/opnfv/functest/conf/env_file \
-v $(pwd)/images:/home/opnfv/functest/images \
opnfv/functest-smoke-cntt
```

TEST CASE	PROJECT	TIER	DURATION	RESULT
tempest_neutron_cntt	functest	smoke	11:35	PASS
tempest_cinder_cntt	functest	smoke	01:58	PASS
tempest_keystone_cntt	functest	smoke	01:13	PASS
tempest_heat_cntt	functest	smoke	22:32	PASS
rally_sanity_cntt	functest	smoke	17:16	PASS
tempest_full_cntt	functest	smoke	41:13	PASS
tempest_scenario_cntt	functest	smoke	08:57	PASS
tempest_slow_cntt	functest	smoke	35:58	PASS

## Run benchmarking suite

```
sudo docker run --env-file env \
-v $(pwd)/openstack.creds:/home/opnfv/functest/conf/env_file \
-v $(pwd)/images:/home/opnfv/functest/images \
opnfv/functest-benchmarking
```

TEST CASE	PROJECT	TIER	DURATION	RESULT
rally_full	functest	benchmarking	93:03	PASS
rally_jobs	functest	benchmarking	27:05	PASS
vmtp	functest	benchmarking	17:56	PASS
shaker	functest	benchmarking	24:02	PASS

## Run benchmarking CNTT suite

```
sudo docker run --env-file env \
-v $(pwd)/openstack.creds:/home/opnfv/functest/conf/env_file \
-v $(pwd)/images:/home/opnfv/functest/images \
opnfv/functest-benchmarking-cntt
```

TEST CASE	PROJECT	TIER	DURATION	RESULT
rally_full_cntt	functest	benchmarking	89:52	PASS
rally_jobs_cntt	functest	benchmarking	19:39	PASS
vmtp	functest	benchmarking	16:59	PASS
shaker	functest	benchmarking	23:43	PASS

## Run vnf suite

```
sudo docker run --env-file env \
-v $(pwd)/openstack.creds:/home/opnfv/functest/conf/env_file \
-v $(pwd)/images:/home/opnfv/functest/images \
opnfv/functest-vnf
```

TEST CASE	PROJECT	TIER	DURATION	RESULT
cloudify	functest	vnf	05:08	PASS
cloudify_ims	functest	vnf	24:46	PASS
heat_ims	functest	vnf	33:12	PASS
vyos_vrouter	functest	vnf	15:53	PASS
juju_epc	functest	vnf	27:52	PASS