

Functest K8s Jerma

README.md (source from Functest-Kubernetes)

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	Kubernetes releases
Hunter	v1.13
Iruya	v1.15
Jerma	v1.17
Kali	v1.19
Leguer	v1.20
Master	v1.21.0-alpha.3 (rolling)

Prepare your environment

cat env

```
DEPLOY_SCENARIO=k8s-XXX
```

Run healthcheck suite

```
sudo docker run --env-file env \  
-v $(pwd)/config:/root/.kube/config \  
opnfv/functest-kubernetes-healthcheck:jerma
```

TEST CASE	PROJECT	TIER	DURATION	RESULT
k8s_quick	functest	healthcheck	00:33	PASS
k8s_smoke	functest	healthcheck	00:49	PASS

Run smoke suite

```
sudo docker run --env-file env \  
-v $(pwd)/config:/root/.kube/config \  
opnfv/functest-kubernetes-smoke:jerma
```

TEST CASE	PROJECT	TIER	DURATION	RESULT
k8s_conformance	functest	smoke	68:21	PASS
xrally_kubernetes	functest	smoke	13:40	PASS

Run security suite

```
sudo docker run --env-file env \
-v $(pwd)/config:/root/.kube/config \
opnfv/functest-kubernetes-security:jerma
```

TEST CASE	PROJECT	TIER	DURATION	RESULT
kube_hunter	functest	security	03:32	PASS
kube_bench_master	functest	security	00:01	PASS
kube_bench_node	functest	security	00:20	PASS

Run benchmarking suite

```
sudo docker run --env-file env \
-v $(pwd)/config:/root/.kube/config \
opnfv/functest-kubernetes-benchmarking:jerma
```

TEST CASE	PROJECT	TIER	DURATION
xrally_kubernetes_full	functest	benchmarking	34:58

Run cnf suite

```
sudo docker run --env-file env \
-v $(pwd)/config:/root/.kube/config \
opnfv/functest-kubernetes-cnf:jerma
```

TEST CASE	PROJECT	TIER	DURATION	RESULT
k8s_vims	functest	cnf	09:30	PASS
helm_vims	functest	cnf	08:20	PASS
cnf_conformance	functest	cnf	02:16	PASS