Automate your performance testing with Network Services Benchmarking
Network NFVI characterization using PROX in an OpenStack context

What is NSB?

Network Services Benchmarking (NSB) is a benchmarking and characterisation tool that automates VNF and NFVi characterisation. It provides a configurable framework to characterise a wide range of workloads, and also provides facilities for benchmarking your NFVi.

NSB combines a number of open source components including: OPNFV Yardstick (test framework), OPNFV Barometer (NFVi metric collection), OPNFV SampleVNFs (reference VNFs), OpenStack, Open vSwitch, DPDK and collectd.

What is in NSB?

Methodology

VNF characterization and benchmarking is done in three different execution environments - bare metal (i.e. native Linux environment), standalone virtual environment and managed virtualized environment (e.g. OpenStack etc.) to help quantify the cost of virtualisation and orchestration.

Yardstick Framework extensions

A number of extensions were made to the Yardstick framework to help support NSB, such as additional traffic generator support, new contexts (environments) and support for VNFs.

Testcases

Testcase examples are given for running RFC2544 tests with different VNFs, traffic profiles and scaling factors (CPU, memory, ports, etc)

VNFs

NSB can use OPNFV SampleVNFs, and allows support to be added for commercial VNFs as well. Available SampleVNFs are CGNAPT, vFW, vACL, cPE, Router and Prox.

KPI collection

NSB characterisation provides simultaneous views of Network, NFVi and application metrics for a given test scenario.

Traffic generator support

NSB has the capability to interact with external traffic generators (both hardware and software based) for triggering and validating the traffic according to user defined profiles. There is currently support for Ixia, Trex and PROX

More information


SampleVNFs: [https://github.com/opnfv/samplevnf](https://github.com/opnfv/samplevnf)


Check out the presentation discussing Barometer and NFVi KPI collection in NSB

Barometer beyond Service Assurance: monitoring as a service in OPNFV and beyond

Emma Foley
Abhijit Sinha
Thursday 9:00 AM Level Two Room 208-209
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What is in this demo?
The demo shows Network Services Benchmarking in an OpenStack context to show how you can characterise VNFs running in your OpenStack cloud. It demonstrates the flexibility of NSB in characterising different VNFs in different clouds, to give the reproducible performance benchmarks. The demo shows:

- PROX, and how it can be used to create VNFs
- Test case execution
- KPI collection and reporting for network, NFVi and VNF metrics
- A configurable dashboard (adding additional graphs).

How can I get involved?
Use NSB scenarios!
Provide feedback to upstream projects
How did you find the user experience?
What KPIs do you want to see?
What other workloads do you want to see?
What are your benchmarking needs?

Check out the upstream projects: