VSPERF & Yardstick integration overview

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Agenda:

- Introduction
- Documentation
- Integration overview
- Code walkthrough
- Next steps
- Questions?
Introduction

- Yardstick - a generic umbrella for OPNFV testing
- Motivation for integration
  - synthetic tests (pvp)
  - real scenarios (vnf deployed by OpenStack)
- Two ways of integration
  - Plugin mode (native tests)
  - Traffic gen mode (currently used)
Documentation

- yardstick architecture:
  http://artifacts.opnfv.org/yardstick/brahmaputra/docs/userguide/architecture.html

- Vsperf:
  http://artifacts.opnfv.org/vswitchperf/colorado/docs/userguide/yardstick.html
Yardstick & VSPERF integration

Diagram showing the integration between Yardstick and VSPERF, with components like HeatContext, TaskCommands, Dispatcher, Runner, and TestScenario, as well as OpenStack components like Heat, Nova, Neutron, Phy-eth, Br-ex, Br-int, VM with VSPERF, and Traffic Generator.
Current limitations

- single node installation of OpenStack
  - only one OVS to configure
- yardstick executed from Networking node
  - no SSH to modify OVS
  - but user can do it manually
- “master” vsperf VM image not available
  - guidelines in the docs
- IxNetwork results stored in shared folder
Source code

Code (yardstick repo):
  - new scenario class:
    ./yardstick/benchmark/scenarios/networking/vsperf.py
  - new unit test:
    ./tests/unit/benchmark/scenarios/networking/test_vsperf.py

Sample testcases (vsperf repo)
  - yardstick/tests/p2p_back2back.yaml
  - yardstick/tests/p2p_cont.yaml
  - yardstick/tests/p2p_tput.yaml
Next Steps (analyze & test)

- OVS configuration change
  - manual through setup-script
  - automatic setup detection and modification

- separate Compute & Network nodes
  - two OVSes to configure
  - flows / tunnels to route traffic from TGEN to VM(s)

- execution of yardstick from jumphost
  - ssh connection to reach open stack nodes
  - vsperf at jumphost vs. vsperf inside VM

- test execution with non IXIA traffic gen
  - focus on MoonGen installed inside VM
Next Steps (implementation)

- based on analysis, update/enhance yardstick code
- add support for new CLI options (generic test-params)
- prepare master VM images
  - VSPERF pre-installed
  - build-in guest loopback app
- prepare more complex tests (e.g. PVP, PVVP, etc.)
- install at POD3 and prepare a daily job for yardstick tests

Note:
- yardstick TCs must be customized for every OpenStack installation