Benchmarking Virtual Switches in OPNFV
draft-vsperf-bmwg-vswitch-opnfv-02

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Outline

• VSWITCHPERF Memo updates
• VSWITCHPERF Framework updates
• VSWITCHPERF Results
• Summary
VSPERF Memo updates

• The memo now **summarizes** the progress of vswitchperf through the Brahmaputra Release in OPNFV.

• Added more complete references to VSPERF Project Artifacts, such as the Level Test Design (LTD) Specification (for Brahmaputra).

• Acknowledge the early work in [I-D.huang-bmwg-virtual-network-performance], and useful discussion with the authors.

• Scope updated to inform the industry as well as BMWG of vswitchperf progress.

• "Soak" tests also added to the test categories, defining this type of test (addressing Marius’ comment)
Test Framework updates

• Supports both:
  • OVS
  • OVS with DPDK

• Loopback applications in the Guest can be:
  • DPDK testpmd.
  • Linux Bridge.
  • I2fwd Kernel Module.

• Supported traffic generators:
  • Ixia: IxOS and IxNet.
  • Spirent.
  • Dummy.

• Available tests:
  • phy2phy_tput: LTD.Throughput.RFC2544.PacketLossRatio
  • back2back: LTD.Throughput.RFC2544.BackToBackFrames
  • phy2phy_tput_mod_vlan:LTD.Throughput.RFC2544.PacketLossRatioFrameModification
  • phy2phy_cont: Phy2Phy Continuous Stream
  • pvp_cont: PVP Continuous Stream
  • pvvp_cont: PVVP Continuous Stream
  • phy2phy_scalability:LTD.Scalability.RFC2544.0PacketLoss
  • pvp_tput: LTD.Throughput.RFC2544.PacketLossRatio
  • pvvp_back2back: LTD.Throughput.RFC2544.BackToBackFrames
  • pvvp_tput: LTD.Throughput.RFC2544.PacketLossRatio
  • pvvp_back2back: LTD.Throughput.RFC2544.BackToBackFrames
  • phy2phy_cpu_load: LTD.CPU.RFC2544.0PacketLoss
  • phy2phy_mem_load: LTD.Memory.RFC2544.0PacketLoss

• Supported deployment scenarios:
  • Physical port -> vSwitch -> Physical port.
  • Physical port -> vSwitch -> VNF -> vSwitch -> Physical port.
  • Physical port -> vSwitch -> VNF -> vSwitch -> VNF -> vSwitch -> Physical port.
Results

• The OPNFV results dashboard is available at:
  • https://www.opnfv.org/opnfvtestgraphs/per-test-projects/vsperf

• The results dashboard is available at:
  • http://testresults.opnfv.org/proto/index-vsperf.html

• Test report is available at:

• Log files collected during the test:
  • https://artifacts.opnfv.org/vswitchperf/brahmaputra/report/logs.tar.gz
Summary

- Real focus since last IETF meeting was to build out the test framework.
- The IETF Draft scope has been limited to summarizing the vswitchperf progress for OPNFV Release B.
- Call for WG adoption is in-progress, any further comments?