Multidimensional TestVNF

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Target Usecase: CNTT - Performance Testing and Benchmarking.

Introduction

This project aims to create a TestVNF-VM and TestVNFManager-container, which includes different opensources and provides ability to perform multi-dimensional performance testing and benchmarking.

The TestVNFManager can be seen as an EMS, which can interact with a GenericVNFM.

What are all the tools that will be considered in TestVNF?

1. Collectd for metrics collection
2. Flexible Packet Processing Framework (Ex: DPPD-PROX)
3. stress-ng
4. fio
5. wrk2
6. ....

TestVNF VM

We propose to use Centos 7 (https://cloud.centos.org/centos/7/images/) .

Only effort required here is to configure the VM with ssh access and credentials.

We have two options for this testvnf:

1. Pre-Built with all packages and configurations.
2. Post-Deploy - installed and configured.

Why TestVNFManager

If we chose the **option-2** for TestVNF creation, mainly because of the 'flexibility' it provides - in supporting different toolset and usecases, the installation and configuration on a deployed-VM (ex: centos cloud-vm) will be done by the TestVNFManager.

TestVNFManager

We propose to use container format for the testvnfmanager application. This (the application) will be python, and it can use either ssh (paramiko library) or Ansible to manage (Install, Configure, Run and Collect) TestVNF.

Reuse of Existing OPNFV-Projects

This project involves lot of "System-Integration" rather than from-the-scratch development. We propose to reuse efforts from following OPNFV projects:

1. VSperf
2. Storperf (Active?)
3. SampleVNF
4. QTip - (Not active)

Architecture

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Usage

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Project Activities

- [ ] Understanding of the tools
- [ ] Configure Centos-VM with user/pwd
- [ ] Deploy CentosVM (referred as TestVNF, from now on) on Pod15/Pod10
- [ ] Version-1 of TestVNFManager: Install and configure collectd and stress-ng on TestVM
- [ ] Version-2 of TestVNFManager: Install and configure FIO (Reuse from StorPerf) on TestVM
- [ ] Version-3 of TestVNFManager: Install and configure DPPD-PROX to run as TGen on TestVM
- [ ] Release-1 of TestVNFManager