Spirent Virtual Cloud Test Lab

A community provided metal resource hosted at Nephoscale, leveraged for SDN/NFV public testing and OpenDaylight, OpenStack, OPNFV projects.

Spirent VCT Lab is currently working on 3 different **OpenStack** environments each one of them deployed on different hardware configuration:

- **OpenStack Juno - 2014.2.2 release** (CentOS 7, 20 Cores, 64 GB RAM, 1 TB SATA, 40 Gbps)
- **OpenStack Juno - 2014.2.2 release** (Ubuntu 14.04, 8 cores, 32 GB RAM, 500 GB SATA, 10 Gbps)
- **OpenStack Icehouse - 2014.1.3 release**
- **OpenStack Icehouse - 2014.1.3 release**

There are a number of different networks referenced in the VPTC Design Blueprint.

- Public Internet – 1 g
- Private Management – 1g
- Mission Clients – 10g
- Mission Servers – 10g

These can be added or removed as specified by the test methodology. There are 8 x 10 gige SFP+ ports available on a typical C100MP used for Avalanche Layer 4-7 testing. The N4U offers 2 x 40 gige QSFP+ ports with the MX-2 Spirent Test Center Layer 2-3 testing. There are 2 x Cumulus switches with 32 ports of 40 gige QSFP+ ports for a total capacity of 256 ports of 10 gige. We use QSFP+ to SFP+ break out cables to convert a single 40 gige port into 4 x 10 gige ports. Together these offer a flexible solution to allow up to 8 simultaneous tests to take place with physical traffic generators at the same time. Assuming a 10 to 1 oversubscription ratio we could handle 80 community users with the current environment. For example:

- An 80 Gbps test would need 4 port pairs of 10 gige each and require 8 mission networks.
- Multiple clients sharing common test hardware might have dedicated management networks for their DUTs yet communicate with the APIs and Management services via a shared DMZ network protected by a firewall.
- SSL and IPSec VPN will typically be leveraged to connect networks across the untrusted Internet or other third party networks.
- Stand-alone DUT servers using STCv and AVv traffic generators could easily scale to hundreds of servers as needed.

Documentation tracking

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