Spirent **Metrics Service**
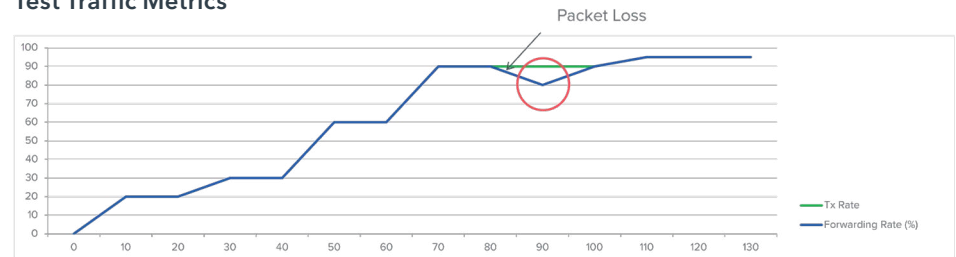
For Spirent CloudSure

Features

- Integrated into Spirent CloudSure
- Collects hundreds of different statistics from the host, Intel PCM, libvirt, OVSDB and Windriver AVS
- Works together with Spirent TestCenter ports and/or Spirent CloudStress agents to simulate network traffic and workloads
- Can also be used with real network traffic and workloads
- Small footprint ensures minimal interference with workloads
- Results are displayed using Spirent TestCenter IQ for:
  - Multi-tier filtering
  - Zoom-in/zoom-out
  - Event markers
  - Thresholds
  - Report generation
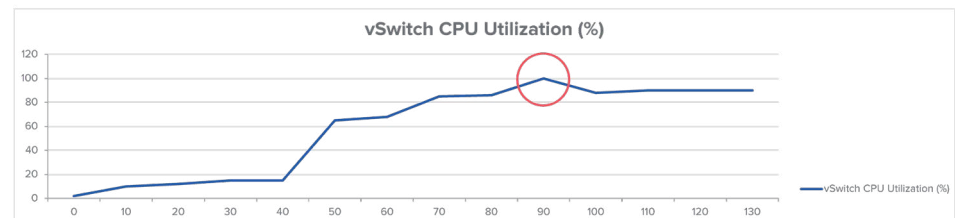- REST API provided for automation purposes

Benefits

- Gain insight into cloud infrastructure
- Correlate statistics with workload or traffic generation to identify performance bottlenecks
- Optimize cloud and NFV environments

Spirent Metrics Service is a tool for gathering statistics from OpenStack and VMware cloud deployments. The gathered statistics provide visibility into cloud infrastructure, giving insight into potential performance issues. The Metrics Service may be used on its own, or in conjunction with workload generation tools such as Spirent CloudStress and/or traffic generation tools such as Spirent TestCenter. Designed for cloud environments, Metrics Service can also be used for benchmarking NFV infrastructure, and tenant VNFs.

Test Traffic Metrics

Spirent Metrics Service

Correlating Traffic Generation Metrics with Spirent Metrics Service

Metrics are collected while Spirent CloudSure tests are running and stored in a centralized database. They are displayed in a graphical format both in real-time and after test execution.

CloudSure collects over 380 individual statistics from seven different sources. In a practical deployment, since there will be multiple sources for some statistics (e.g. multiple interfaces), total number of statistics could be even greater. Furthermore, each metric may be sampled as frequently as once per second. Due to the large volume and complexity of statistics, it is important to have the right tools to navigate and manipulate test data.

CloudSure uses Spirent TestCenter IQ, a powerful framework for viewing and organizing results, allowing users to perform multi-stage filtering, sorting, and zoom functionality to enable rapid isolation of the most interesting results. TestCenter IQ also generates PDF reports for convenient sharing of test results with colleagues and customers.

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Metrics Service collects the following statistics categories:

Host	• host_metrics
	• host_proc_metrics_metrics
	• host_network_interface_metrics
Intel PCM	• intel_pcm-system_metrics
	• intel_pcm_core_metrics
Libvirt	• libvirt_domain_metrics
	• libvirt_domain_core_metrics
	• libvirt_domain_block_metrics
	• libvirt_domain_interface_metrics
OVSDB	• vswitch_dpdk_interface_ metrics
	• vswitch_dpdk_pmd_metrics
	• vswitch_interface_metrics
Windriver AVS	• avs_vswitch_interface_metrics
	• avs_vswitch_port_metrics
	• avs_vswitch_port_queue_metrics

Deployed as a process on the host operating system, Metrics Service occupies a small footprint, consuming less than a few percent of a CPU core to monitor a single VM, increasing slightly when more VMs are monitored. Sample data provided below showing typical resource usage scenarios.

		Resources Used	
		with 1 VM running	**With 7 VMs running**
Agent CPU		1.7% of 1 CPU core	4% of 1 CPU core
Agent Memory	Virtual	1238328 bytes	1238328 bytes
	Resident	31832 bytes	31464 bytes
	Shared	19932 bytes	19932 bytes
Interface BW		50 kbps	80 kbps
Metrics Rate		77 metric/sec	110 metrics/sec

Resource Utilization for Typical Deployments
Test System: Supermicro 16 CPUs Intel® CPU D-1540 @ 2.00GHz

Ordering Information

Spirent Metrics Service for CloudSure is only available as part of CloudSure kits. Please see Spirent CloudSure data sheet, or contact your Spirent Sales Rep for more information.

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