

Spirent CloudSure

NFVi Benchmarking Test Package

Features

- Tests aligned with ETSI standard TST-001/Chapter 6
- Measures performance for
 - Memory
 - Compute
 - Storage
 - Network
- Uses Spirent TestCenter Virtual or physical ports to generate realistic L2-7 network traffic
- Uses Spirent CloudStress agents to simulate CPU, memory, and CPU workloads
- Use via API or graphical user interface

Benefits

- Gain confidence that your NFV deployment will deliver the expected performance
- Benchmark NFV infrastructure as per ETSI
- Get visibility into performance bottlenecks

Spirent CloudSure test package for NFVi Benchmarking consists of various test templates to measure the performance of NFV infrastructure. It leverages Spirent's NFV testing expertise derived from extensive experience in ETSI plugfest events, to define test templates around real-world requirements.

Each test template works together with the CloudSure application to measure the networking, compute, memory, and storage performance. This test package uses Spirent TestCenter ports (virtual and physical) to generate/analyze network traffic, and Spirent CloudStress agents to generate memory, compute and storage workload. Spirent Metrics Service Agent(s) are also deployed in the cloud under test to gather statistics from the host, Intel PCM interfaces, libvirt, OVSDB, and Windriver AVS.

Each template can be easily configured via the CloudSure graphical user interface, with the user setting the parameters for the VIM profile, as well as parameters specific to each test. To inspect the state of the cloud under test, users can execute tests in their entirety or step-by-step. Results are displayed graphically and numerically in real time, and at the end of test. They may be manipulated using Spirent TestCenter IQ™, allowing users to perform thresholding, multi-level filtering, sorting, and zooming-in/zooming on data to quickly identify bottlenecks and potential root causes of performance problems. Reports may be generated in different formats, including PDF. For automation purposes, a REST API is provided to help with configuration, execution and extracting of results.

Test Cases

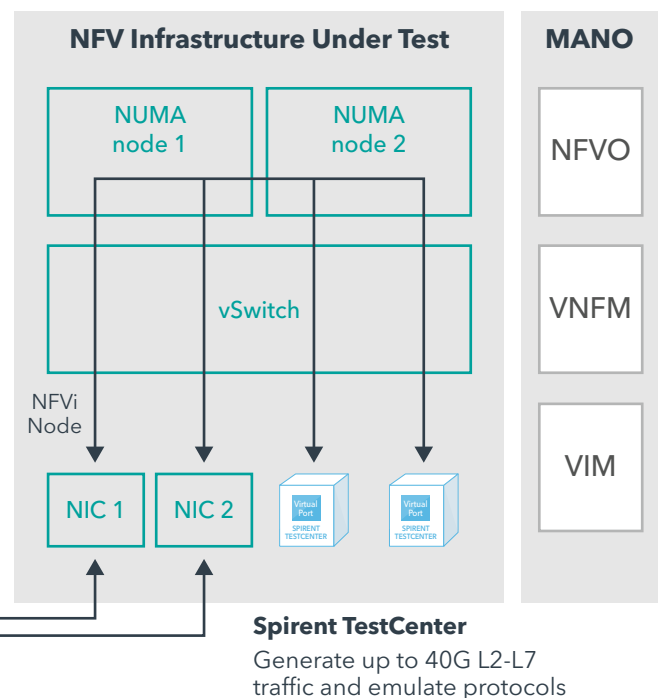
- Cross NUMA node
- NUMA to External
- External to External
- Internal to External

Spirent TestCenter Physical

Generate up to 400G L2-L7 traffic and emulate protocols to benchmark VNFs



Bi-dir
L2-L7
traffic



About Spirent Communications

Spirent Communications (LSE: SPT) is a global leader with deep expertise and decades of experience in testing, assurance, analytics and security, serving developers, service providers, and enterprise networks.

We help bring clarity to increasingly complex technological and business challenges.

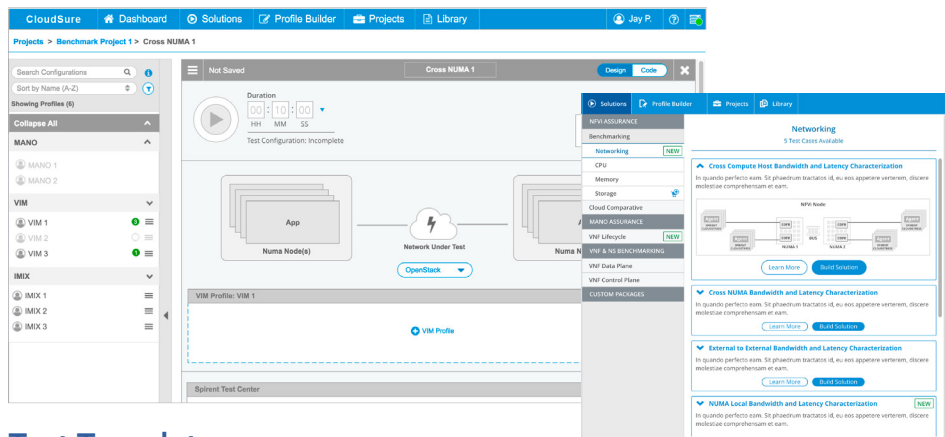
Spirent’s customers have made a promise to their customers to deliver superior performance. Spirent assures that those promises are fulfilled.

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Test Templates

- **Networking:** measure network data plane performance (loss and latency)
- **Compute:** determine the maximum CPU workload that can be handled by a compute host filled to capacity using a specified VM flavor, or filled with a specified number of agent VMs of a specified flavor
- **Memory:** determine the aggregate memory bandwidth and latency that can be accomplished by a compute host filled to capacity using a specified VM flavor, or using a specific number of agent VMs of a specified flavor
- **Storage:** benchmark the block I/O performance of the storage backend that can be handled by a single compute host filled to capacity using a specified VM flavor, or multiple compute hosts using a specified number of agent VMs of a specific flavor

Results

CloudSure provides test results in intuitive and helpful results views, enabling users to see case results from the lowest level (time series results display) up to the total aggregated level, either in graphical views or table format. Additional views are provided to show disaggregated data. For example, Networking test cases provide the following information:

- Metric over emission rate
- Metric between compute nodes
- Metric between NUMA nodes
- Metric between NUMA node and STC HW
- Metric between VMs
- Metric between VM and STC HW
- Metric per Test Network
- Metric distribution across Streams per stream

Ordering Information	
Applications	Description
TMV-CSU-NFVBN-TPK-SUB	NFVi Benchmarking TST-001/Chapter 6 Test Pack for CloudSure

This product is also available as part of various kits for Spirent CloudSure. Please refer to Spirent CloudSure data sheet, or contact your Spirent Sales Rep for more information.