

# Spirent CloudScore

## Score Your Cloud with Spirent

With Cloud Computing technologies gaining adoption, there is a constant need for Enterprises, Cloud Providers, and DataCenter Operators to optimize their Virtualized infrastructure. As a Network and Cloud architect you are simply asking which is the right infrastructure for me and whether my existing Cloud deployment is configured properly to host my VMs or Application Workloads, Services, VNFs, service chains in NFVi, etc.

Furthermore, you need a benchmarking tool or service that can thoroughly:

- Validate Hypervisor host or Cloud
- Measure overhead of Operating System specific events
- Visualize the impact of Linux Kernel Compilation on Hypervisor Host or Cloud CPU
- Measure compression KPIs like 7-zip, pigz, STREAM synthetic benchmark
- Measure KPI of data transfer bandwidth from/to the memory
- Leverage SPEC CPU™ 2006 (industry-standardized benchmark suite) to analyze the impact on Cloud deployment after services or VNFs are deployed
- Measure the performance impact of Cloud Infrastructure when upgrades happen

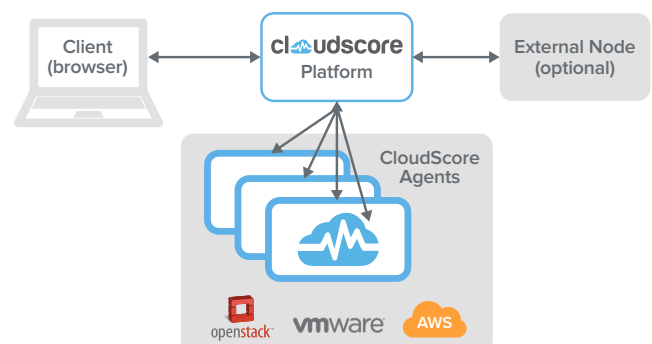
Spirent CloudScore is a service-based Cloud validation solution which addresses the above needs and helps you to monitor the health of the Cloud deployments by running a series of highly complex short and long duration tests. Spirent CloudScore analyzes and generates a comprehensive report establishing a single figure of merit (SCORE) for all your cloud deployments.

## How it Works

Spirent CloudScore is designed to compare and contrast the health of multiple cloud instances – private, public or hybrid. It performs comprehensive analysis to baseline and benchmark the cloud deployments. You can run a series of selection-based tests on your Virtualized infrastructure and generate reports with a score. The scorecard indicates the health of your infrastructure across various components – Compute, Network, Storage, Applications, and Services – and provides a granular report with recommendations on how you can optimize the infrastructure thereby helping you to make those changes and improve the score when you re-run the tests. However, it is not designed to perform cloud optimization but rather to create a performance profile of the cloud infrastructure.

Spirent CloudScore is typically hosted in its designated organizational/tenant space within a cloud to reduce the risk of interfering with other applications in terms of performance. Spirent CloudScore runs only in “read only” mode without changing your cloud configuration parameters or setup. During tests run, Spirent CloudScore automatically orchestrates test agent VMs and tears them down after report generation. You can configure Spirent CloudScore to automatically run tests or save them to run at regular intervals or defined schedule.

## Topology Diagram



## Key Features

- Provide baseline score for greenfield or existing cloud deployments with planned VMs or Application workloads, Services, VNFs that have been recently deployed on the cloud.
- Test with different (current and future) traffic models and workloads to assess existing cloud deployments and comparative benchmarking of alternative configurations.
- Periodically benchmark cloud deployments against the baseline score for event-based changes on the existing cloud deployments like planned infra or software changes.
- Detection of anomaly/deviation of cloud metrics (either from VNF counters or from cloud/infra monitoring) that triggers the need for re-verification.

## Sample Test Cases

Spirent CloudScore tests are available through "Services" engagement. The test cases are broadly classified into following Test Suites.

- **Compute Infrastructure Tests:** Runs a series of tests to measure CPU performance along with other compute related tasks. It includes the following main tests.
  - LMBench
  - Kernel Compile
  - Compression
  - STREAM memory
  - SPEC CPU™ 2006
  - Unixbench tests.

- **Network Tests:** Runs various tests to assess network performance, measuring latency, jitter and throughput. It includes the following tests.
  - Network Infrastructure Testing - Intra AZ Network, Intra AZ Network Jitter, Inter AZ Network, Inter AZ Network Jitter.
  - Network Infrastructure Testing (Inter-AZ) - Inter AZ Network, Inter AZ Network Jitter
  - Network Infrastructure Testing (Single Zone w/o External Gateway) - Intra AZ Network, Intra AZ Network Jitter.
  - Network Infrastructure Testing (Single Zone) - Intra AZ Network, Intra AZ Network Jitter, External Network.
  - Network MTU Testing - MTU Benchmark test
- **Storage Tests:** IO performance tests using different tools and test scenarios to allow deep analysis of cloud related to storage tasks. It includes the following tests.
  - FIO
  - IOzone
- **Applications Tests:** Runs multiple application specific tests to gather additional performance metrics. It includes the following tests.
  - CSD
  - IPSL Sip
- **Services Tests:** Discover and monitor services running in the cloud. It includes the following tests.
  - Cloud API Performance
  - Service discovery OpenStack

---

## Contact Us

For more information, call your Spirent sales representative or visit us on the web at [www.spirent.com/ContactSpirent](http://www.spirent.com/ContactSpirent).

[www.spirent.com](http://www.spirent.com)

© 2018 Spirent Communications, Inc. All of the company names and/or brand names and/or product names and/or logos referred to in this document, in particular the name "Spirent" and its logo device, are either registered trademarks or trademarks pending registration in accordance with relevant national laws. All rights reserved. Specifications subject to change without notice.

Americas 1-800-SPIRENT  
+1-800-774-7368 | [sales@spirent.com](mailto:sales@spirent.com)

US Government & Defense  
[info@spirentfederal.com](mailto:info@spirentfederal.com) | [spirentfederal.com](http://spirentfederal.com)

Europe and the Middle East  
+44 (0) 1293 767979 | [emeainfo@spirent.com](mailto:emeainfo@spirent.com)

Asia and the Pacific  
+86-10-8518-2539 | [salesasia@spirent.com](mailto:salesasia@spirent.com)