ABSTRACT
Overview and future outlook of the #1 industry standard virtualization benchmark, SPECvirt_sc2010.

Categories and Subject Descriptors
H.3.4 [Systems and Software]: Performance evaluation (efficiency and effectiveness)

General Terms
Design, Experimentation, Measurement, Performance, Reliability, Standardization

Keywords
ACM  978-1-4503-1202-8/12/04.ACM  978-1-4503-1202-8/12/04 SPEC, Virtualization, Benchmark, Energy Efficiency, Server, Storage, Datacenter

1. SPECvirt_sc2010 OVERVIEW

SPECvirt_sc2010 [1] is designed to be a standard method for measuring a virtualization platform's ability to manage a server consolidation scenario in the datacenter and for comparing performance between virtualized environments. It is intended to measure the performance of the hardware, software, and application layers in a virtualized environment. This includes both hardware and virtualization software and is intended to be run by hardware vendors, virtualization software vendors, application software vendors, academic researchers, and datacenter managers. The benchmark is designed to scale across a wide range of systems and is comprised of a set of component workloads representing common application categories typical of virtualized environments.

Rather than offering a single benchmark workload that attempts to approximate the breadth of consolidated virtualized server characteristics found today, SPECvirt_sc2010 uses a three-workload benchmark design: a webserver, Java application server, and a mail server workload. The three workloads SPECvirt_sc2010 utilizes are derived from SPECweb2005, SPECjAppServer2004, and SPECmail2008.

2. Future Design Considerations
As hardware and software technologies continue to progress and marketplace virtualization trends evolve, The SPEC Virtualization committee continues to work on updates and future benchmarks.
to provide meaningful tools to measure these technologies. Several future design considerations for new workload models, including enterprise-class server consolidation and data center virtualization (such as VM provisioning and VM migration), are currently being discussed and developed for future benchmark releases.

3. ACKNOWLEDGMENTS
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The name SPEC together with its tool and benchmark names are registered trademarks of the Standard Performance Evaluation Corporation (SPEC) [3].

4. REFERENCES