

redhat

TOGETHER BRINGING SOLUTIONS TO THE ENTERPRISE

## Ideal Solutions

Enabling industry leading solutions and freedom with the world's most deployed compute architecture

Collaboration is valuable when it produces tangible, lasting results and a sustainable competitive advantage for those involved. Take for example Red Hat Enterprise Linux\* 5 (RHEL 5) and Quad-Core Intel® Xeon® processor-based platforms. Through deliberate collaboration with Intel engineers, Red Hat's latest solution fully leverages innovative Intel technologies to deliver groundbreaking performance and reliable performance with virtualization.

### Compelling Linux\* Virtualization Solutions

IT-focused organizations have a new opportunity to gain a significant TCO advantage with virtualization that is more seamless and efficient and easier to deploy. By optimizing their latest solution with Intel® Virtualization Technology (Intel® VT), Red Hat has enhanced the virtualization capabilities of RHEL 5, setting some impressive performance benchmarks in the process.

### Intel and Red Hat Enable Freedom for IT

In today's ultra-competitive and highly demanding business environment, IT departments need solutions that can enable new business services and mitigate corporate risk, while cutting costs, streamlining IT operations and improving TCO. New Quad-Core Intel Xeon processor-based platforms meet these needs—offering over 4x more performance per watt than previous-generation, single-core Intel Xeon processors.<sup>1</sup> Since RHEL 5 is optimized to take advantage of the

### Red Hat Enterprise Linux 5\* Takes Advantage of Multi-Core

New quad- and dual-core processors from Intel place multiple processing cores on a single piece of silicon. Working together, these processors can efficiently share workload and deliver a wealth of performance in a smaller, more energy efficient package. With either single or parallel workloads, users can take advantage of multi-core processor parallelism. The Linux kernel is enabled to be multi-core aware, maximizing resource utilization in power savings or performance mode. RHEL 5 is optimized to take full advantage of multi-core processor capabilities and is fully validated to deliver groundbreaking performance.

### Intel® Virtualization Technology

Intel® Virtualization Technology (Intel® VT) is a set of processor and I/O enhancements that simplifies and enhances traditional and emerging software virtualization solutions. Red Hat Enterprise Linux\* 5 virtualization solutions run multiple operating systems in virtual machines using Intel® VT, while maximizing the performance benefits of multi-core platforms. IT-focused organizations have an opportunity to gain a significant TCO advantage with virtualization that is more seamless, efficient and easier to deploy. With virtualization headroom, IT departments can consolidate with confidence using Red Hat and transition away from proprietary and restrictive UNIX\*-based solutions to industry standard platforms.

latest features of next-generation Intel platforms, an IT department can experience significant decreases in TCO as they benefit from lower electricity, cooling and real estate costs. The best news? All these benefits can be experienced without sacrificing performance.

### Ideal Time to Standardize

Companies looking to achieve optimal price/performance, flexibility, and high data center availability are turning to the advanced capabilities enabled by Linux\* running on quad-core Intel processor-based platforms. Studies show that migrating to Linux can save enterprises as much as 45–80% in total cost of ownership over UNIX\*.<sup>2</sup> With new advanced technologies built into the latest Intel processors and platforms, there has never been a better time to standardize your IT infrastructure with Intel® multi-core processor-based platforms and industry leading RHEL 5.

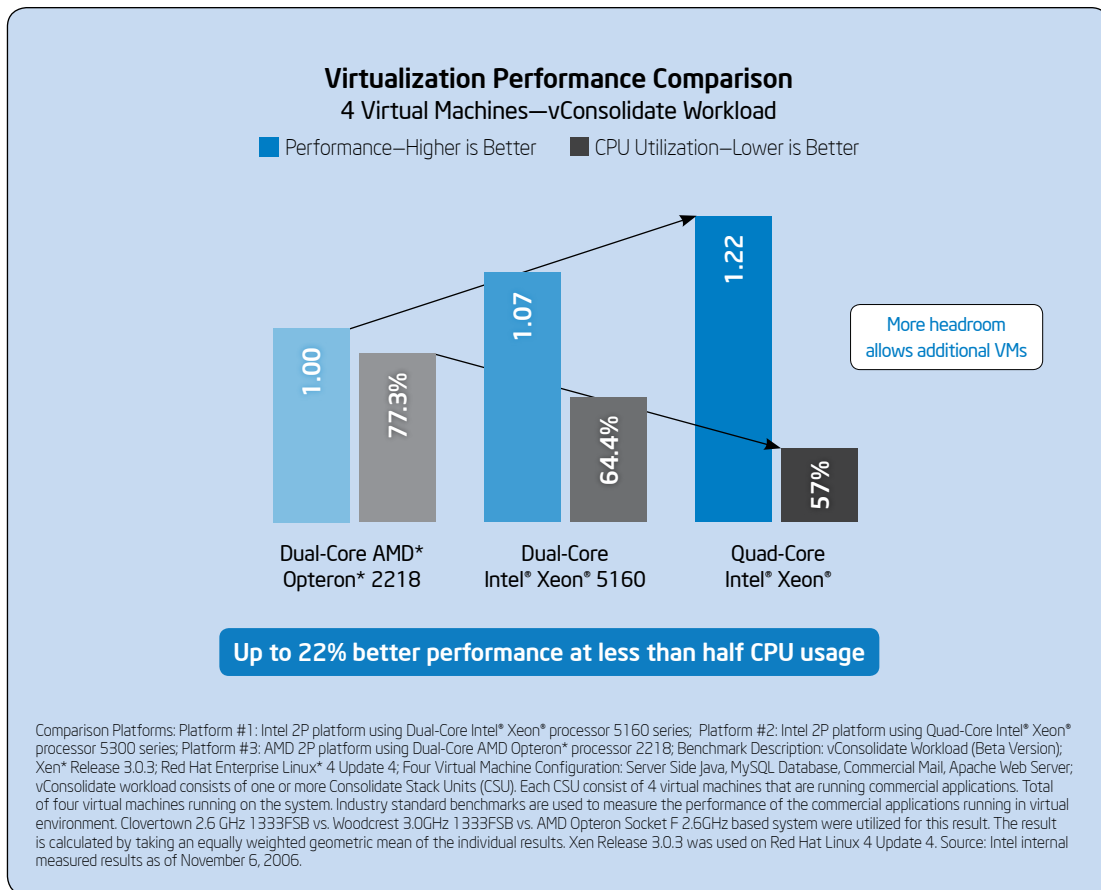
## Groundbreaking Benchmarks

With Red Hat on Intel platforms, performance was built in from day one—and it shows. Looking at the latest vConsolidate benchmarks, it's easy to see the significant performance advantage Red Hat on Intel offers with virtualization. While the benchmarks shown below reflect RHEL 4, even greater performance gains are expected with RHEL 5 optimizations.

Designed as part of a joint Intel and IBM initiative, vConsolidate is a new virtualization benchmarking methodology that helps IT managers identify and quantify the value of virtualization in their organizations. Running multiple instances of consolidated database, mail, Web and Java workloads in multiple virtual CPU partitions, it simulates real-world server performance in a typical environment.

Learn more today at [www.redhatonintel.com](http://www.redhatonintel.com)

## Quad-Core Intel® Xeon® Processor 5300 Series and Red Hat Enterprise Linux\* 4.4 vConsolidate Workload Performance in Virtualized Environments—Virtualization Solutions on Intel Platforms



<sup>1</sup> Performance measured using SPECint\_rate\_base2000, TPC-C, Specjbb2005, and SAP SD. Intel internal measurement (September 21, 2006) comparing system configurations of Intel® Xeon® Processor 5300 Sequence Platform, 2.67 GHz w/ 2x4MB L2 Cache/ 1333 MHz FSB, 8GB (8 x 1GB FB DIMM Memory) to Intel® Xeon® Processor 5160 Series 3.00 GHz w/ 4M L2 / 1333 MHz FSB, 8GB (8 x 1GB FB DIMM Memory) to 2 AMD Opteron\* processor Model 2220SE (2.80 GHz, 1MB L2 Cache) / 4GB (8x512MB) DDR2-667 memory. Actual performance may vary. For further information see: [www.intel.com/performance/server/titanium2/high\\_end.htm](http://www.intel.com/performance/server/titanium2/high_end.htm).

<sup>2</sup> Source: IDC, 2004

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