



# A quantum leap in enterprise computing and cost savings.

Experience world-record-breaking scalability and performance with the new Intel® Xeon® processor 7500 series.



The Intel® Xeon® processor 7500 series delivers reliability and scalability for the most demanding applications and biggest workloads. Built on the breakthrough 45nm Intel® microarchitecture, these processors offer intelligent performance and advanced reliability features that automatically adapt to your workload needs.

Run mission-critical applications with complete confidence, and enjoy massive scalability for future growth—up to 8 sockets and 2 terabytes of memory. Larger systems of up to 256 sockets are also available from vendors using third-party node controller technology. And with Intel® Scalable Memory Interconnect technology, you can benefit from up to eight times more memory bandwidth.<sup>1</sup> It all adds up to an outstanding server solution for large data-demanding workloads and memory consolidation/virtualization deployments, as well as a cost-effective alternative to expensive, proprietary RISC processor based systems.

## IT Analysis for Typical 4-Socket Intel® Xeon® Processor Based Servers

	PURCHASED IN 2005	PURCHASED IN 2010	BENEFIT
Processors	Intel® Xeon® processor (1 core, 3.33 GHz, 8-MB L3 cache)	Intel® Xeon® processor X7560 (8 cores, 2.26 GHz, 24-MB L3 cache)	Seven additional cores per processor plus Intel® Hyper-Threading Technology enable record-breaking performance for demanding applications
Performance per Server	Baseline	Up to 20X <sup>2</sup>	Performance increase enables greater capacity or consolidation
Total Number of Servers	200 servers	10 servers	Reduced data center footprint and maintenance needs

## Financial Analysis for Typical 4-Socket Intel® Xeon® Processor Based Servers

	PURCHASED IN 2005	PURCHASED IN 2010	BENEFIT
Total Annual Energy Costs (estimated)	\$220,000	\$18,000	More than \$200,000 in annual savings
Operating System Licensing Costs (estimated)	\$180,000	\$9,000	More than \$170,000 in annual savings
ROI			<1 year <sup>2</sup>

### Refresh for real business benefits.

Whether you want to refresh to get more performance from the same number of servers or are looking to increase efficiencies by consolidating, the new Intel Xeon processor 7500 series delivers measurable performance advantages.

From a performance standpoint, replacing a server purchased in 2005 with a new Intel Xeon processor 7500 series based server enables up to 20 times the performance.<sup>2</sup> Alternately, you could replace 20 of your older servers with one new Intel Xeon processor 7500 series based server and achieve ROI in less than a year based on savings on operating system licenses and energy costs alone.<sup>2</sup>

For more information about the Intel® Xeon® processor 7500 series, contact your Intel sales representative or visit [www.intel.com/itcenter/products/xeon/7500](http://www.intel.com/itcenter/products/xeon/7500)

Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel® products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance. Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing. For more information on performance tests and on the performance of Intel products, visit [Intel Performance Benchmark Limitations](#). Intel does not control or audit the design or implementation of third party benchmark data or Web sites referenced in this document. Intel encourages all of its customers to visit the referenced Web sites or others where similar performance benchmark data are reported and confirm whether the referenced benchmark data are accurate and reflect performance of systems available for purchase.

<sup>1</sup> 8.2x memory bandwidth claim based on February 2010 Intel internal measurement using Intel internal memory bandwidth workload on comparable 4S Intel® Xeon® processor X7560 and 4S Intel® Xeon® processor X7460 servers.

<sup>2</sup> Claim based on comparison between 4S Intel Xeon MP CPU 3.3Ghz (Single core with Intel® HT, 1MB L2, 8MB L3, Potomac) and 4S Intel Xeon processor X7560 (8 core, 2.26GHz) based servers. Calculation includes analysis based on performance, power, cooling, electricity rates, operating system annual license costs and estimated server costs. This assumes 42U racks, \$0.10 per kWh, cooling costs are 2x the server power consumption costs, operating system license cost of \$900 per year per server, per server cost of \$36,000 based on estimated list prices, and estimated server utilization rates. All dollar figures are approximate. SPECint\_rate\_base2006\* performance and power results are measured for Intel Xeon processor X7560 and Intel® Xeon® processor 3.3GHz based servers. Platform power was measured during the steady state window of the benchmark run and at idle. Performance gain compared to baseline was 20x.

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