



HP Integrity BL870c server blade: #1 SPECjAppServer2004 world record performance result, defeating IBM POWER6 BladeCenter servers



HP Leadership



» The HP Integrity BL870c server blade delivers a leading platform to run mission-critical applications in a bladed infrastructure, providing superior virtualization, high availability, scalability, simplified management, and energy efficiency.

Customer Value



What are the customer benefits of using the HP Integrity BL870c server with Oracle and SPECjAppServer2004?

Many businesses aggressively use the Web to permit customers direct specification of product configuration, ordering, and status checking. In addition, businesses strive to fully automate manufacturing, inventory, supply chain management, and customer billing.

For reasons of interest, scope, and familiarity, the SPECjAppServer 2004 benchmark makes use of manufacturing, supply chain management, and order/inventory as the "storyline" of the business problem. It is heavyweight, mission-critical, worldwide, 24x7, and necessitates use of a powerful and scalable infrastructure. It is one that many Fortune 500 companies are interested in.¹ And one that needs the best infrastructure to run it.

The HP Integrity BL870c blades using Oracle provide organizations with a robust and reliable platform for these mission-critical applications. The superior floating point capabilities of the Intel® Itanium® processor utilized in the BL870c are ideal for high performance and technical computing requirements.

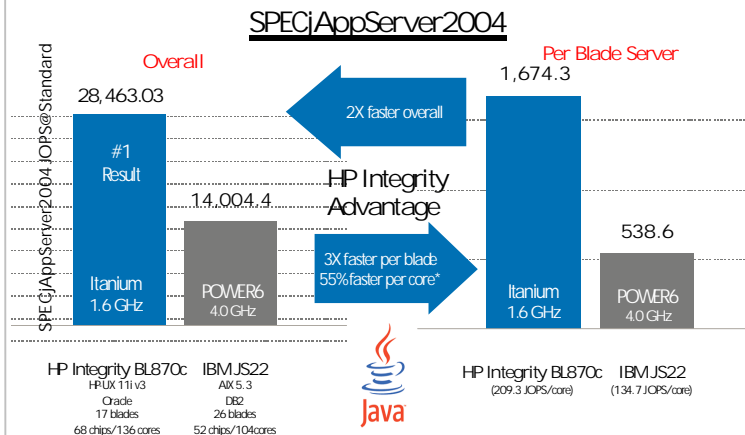
With its variety of server blades and the leadership results of this Integrity BL870c SPECjAppServer 2004 benchmark, HP offers customers the BEST PLATFORM for their business applications.

Key Points

- Continuing its #1 world record leader position on the SPECjAppServer2004 benchmark, the HP Integrity BL870c server blade running HP-UX 11i v3 showed leading performance with its latest result of 28,463.03 JOPS@Standard.
- The standards-based Integrity server blade result outpaced the proprietary-based IBM JS22 (POWER6) server blade by 3X faster performance per blade and 55% faster performance per core.
- The Integrity BL870c and Oracle solution also demonstrated better performance by 25% vs. the IBM BladeCenter HS21 and DB2 solution.

Figure 1. SPECjAppServer2004 comparison results: HP Integrity BL870c vs. IBM JS22

HP Integrity BL870c Server Blade #1 Overall Result - Beats POWER6



* Comparing HP BL870c result of 28,463.03 JOPS using 136 cores with 209.3 JOPS/Core to IBM JS22 result of 14,004.42 JOPS using 104 cores with 134.7 JOPS/Core. Results as of 06/17/09, see: www.spec.org SPECjAppServer2004, is a trademark of the Standard Performance Evaluation Corp. (SPEC).

HP Integrity Server Blades

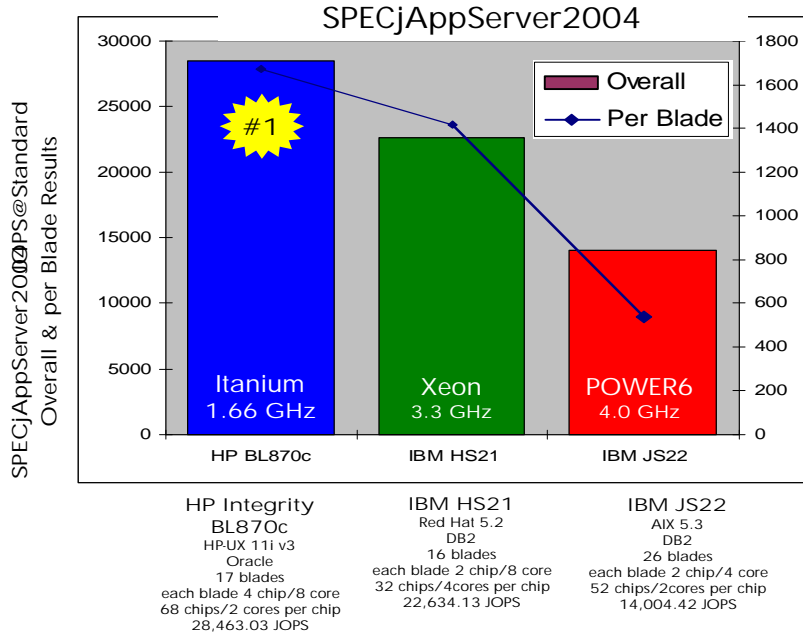
- #1 Overall SPECjAppServer2004 Result
- 3X better performance per blade than the JS22
- 55% better performance per core than the JS22
- 2X better performance than the JS22 result
- 25% better performance than the HS21 result

Technology for better business outcomes.

The HP Integrity BL870c server blade, configured with Intel Itanium processors, shows up to 55% improved performance when compared to IBM's BladeCenter JS22 with IBM POWER6 processors and up to 25% improved performance when compared to IBM's BladeCenter HS21 with Intel Xeon processors.

Figure 2. HP Integrity BL870c server blades perform better than IBM Xeon or POWER6 BladeCenter servers on the SPECjAppServer2004 benchmark.

HP Integrity BL870c server blade Delivers #1 Overall Result



HP BL870c Delivers:
• #1 Overall
SPECjAppServer2004 Result

- 3X better performance per blade than the JS22
- 55% better performance per core than the JS22
- 2X better performance than the JS22 result
- 25% better performance than the HS21 result



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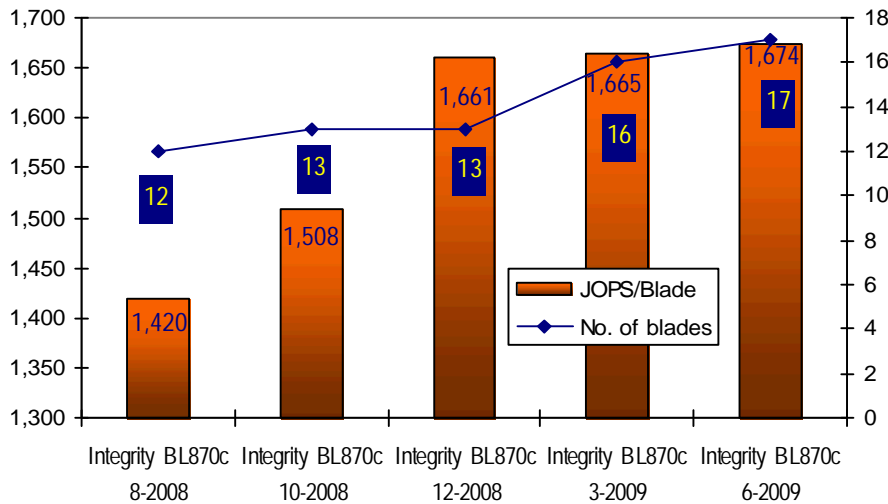
Table 1. SPECjAppServer2004 configuration for system results.

System Description	SPECjAppServer2004 JOPS@Standard	App/Database/OS
HP Integrity BL870c server blade dual-core Intel Itanium 9100series 1.6GHz; 17 blades 136 cores/68 chips/2 cores per chip	28,463.03	Oracle WebLogic Server Standard Edition Release 10.3 HP-UX 11iv3 September 2008
IBM xSeries BladeCenter HS21 quad-core Intel Xeon x5470 3.325GHz; 16 blades 128 cores/32 chips/4 cores per chip	22,634.13	WebSphere 7.0.0.1 Application Server with EJB3 Feature Pack Red Hat Enterprise Linux 5, Server Update 2; DB2 9.5
IBM BladeCenter JS22 Express dual-core POWER 6 4.0GHz; 26 blades 104 cores/52 chips/2 cores per chip	14,004.4	WebSphere 6.1 Application Server with EJB3 Feature Pack IBM AIX 5L V5.3; DB2 9.5

HP performance scalability increases with next generation technology

In addition to achieving the #1 overall performance on the SPECjAppServer2004 benchmark, the Integrity BL870c displayed its excellent scalability results with higher performance per blade, even with an additional node in this latest benchmark.

Figure 3. Comparison of performance scalability for the Integrity BL870c.



The latest SPECjAppServer2004 result for the Integrity BL870c of 1,674 JOPS/Blade showed a 17.8% overall performance scalability increase with a five node increase when compared to its first result of 1,420 JOPS/Blade.

All results as of 06-17-09

About the SPECjAppServer2004 Benchmark

SPECjAppServer2004 is a multi-tier benchmark for measuring the performance of a representative J2EE application and each of the components that make up the application environment, including hardware, application server software, JVM software, database software, JDBC drivers, and the system network. For more information, visit <http://www.spec.org/jAppServer2004/>.

HP Integrity server blade configuration

The HP Integrity BL870c server blade was configured with 17 x 1600MHz dual-core Intel Itanium 9100 series processors (8 cores/ 4 chips/ 2 cores per chip), with 16KB(I)+16KB(D) L1 cache, 1024KB(I)+256KB(D) L2 cache, 2 x 12MB L3 cache, and 32,736GB main memory. The server was running HP-UX 11i v3 September 2008 release with Oracle WebLogic Server Standard Edition Release 10.3.

The Integrity Advantage

HP Integrity BL870c server blade

Designed to support mission critical application demands, the HP Integrity BL870c server blade brings the industry leading availability, scalability, and virtualization found in all HP Integrity servers to HP BladeSystem c-Class. The BL870c offers Intel Itanium processing capabilities, impressive memory expansion, and management tools that make it easy to deploy and maintain.

The HP Integrity BL870c server blade is a four-socket, full-height server blade featuring three models of the latest Intel Itanium 9100 series processors supported by up to 192GB memory (24 DIMM slots). The BL870c features four Gigabit Ethernet ports standard, support for three standard c-Class I/O mezzanine cards, and up to four internal SFF SAS hot-plug disk drives.

HP proven performance

HP has posted hundreds of leading results on the most commonly referenced benchmarks on hundreds of HP servers and blades, helping customer to be confident in HP.

For more information

HP Integrity BL870c server blade: www.hp.com/go/bl870c

SPECjApp2004 details: <http://www.spec.org/jAppServer2004/results/>

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June 2009

ⁱ Excerpted from SPECjAppServer 2004 Design Document: <http://www.spec.org/jAppServer2004/docs/DesignDocument.html>