



# HP Integrity BL860c server blade reaches exceptional performance results on two-tier SAP® SD and SAP SD-Parallel Standard Application Benchmarks



## HP Leadership with Integrity servers



» The HP Integrity BL860c server blade delivers the robust value and virtualization of Integrity systems coupled with the efficiency and economics of the HP BladeSystem c-Class. The Integrity BL860c server blade is a versatile and expandable next-generation HP Integrity server that is well-suited for customers' mission critical needs such as application-tier, transaction, database, Java™, business intelligence, and technical computing workloads.

## Customer Value

What are the benefits of using HP Integrity servers and SAP applications?

The Integrity BL860c server blade for BladeSystem c-Class is an ideal infrastructure solution that will meet the increasing demands of tomorrow's IT environment by enabling customers with greater flexibility and improved performance while reducing overall operational costs.

HP Integrity BL860c server blades and SAP applications combine to deliver a datacenter solution that has excellent performance, is highly available, and is cost-effective for deploying all SAP components in an enterprise – SAP ERP, all the application modules, as well as the foundational database.

The HP BladeSystem c-Class leapfrogs the competition with innovations that address data center pain points. The HP BladeSystem c-Class is built with three innovative technologies that lower costs and raise productivity: Thermal Logic, for reducing power consumption; Insight Control, for automating management and provisioning; and Virtual Connect, for simplifying LAN and SAN connections.<sup>1</sup>

HP Integrity servers have also proven to be reliable and cost-effective. HP servers host almost 50% of all installations of SAP solutions, with more than 60,000 installations and 25,000 customers.

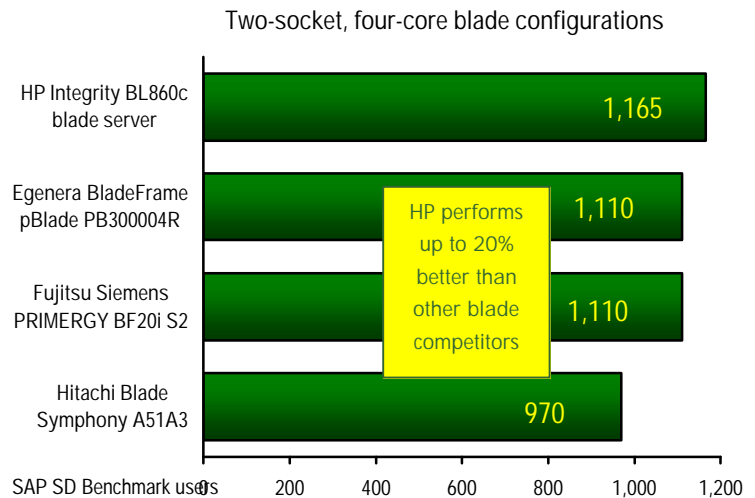
Customers can be reassured that choosing the HP Integrity BL860c is the **RIGHT CHOICE** for addressing demanding workloads.

All results as of 09-22-2008. Details can be found at <http://www.sap.com/benchmark>

## Key Points

- HP Integrity earned outstanding performance results on the two-tier SAP® Sales and Distribution (SD) Standard Application Benchmark and on the SAP SD-Parallel Standard Application Benchmark with its BL860c server blade.
- The BL860c is the first HP Integrity server blade result on the SAP SD Standard Application Benchmark.
- The two-tier result surpassed other blade competitors such as Fujitsu Siemens, Egenera, and Hitachi, among others, by up to 20% in performance results.\*
- The BL860c server blade has an excellent scalability performance of greater than 1.9x. See page 2 for details.

Table 1. A comparison of the HP Integrity BL860c and other blade competitor results on the two-tier SAP SD Standard Application Benchmark. Details can be found in Appendix A.



\*The Integrity BL860c outperforms the Hitachi Blade Symphony by up to 20%. Details in Appendix A.

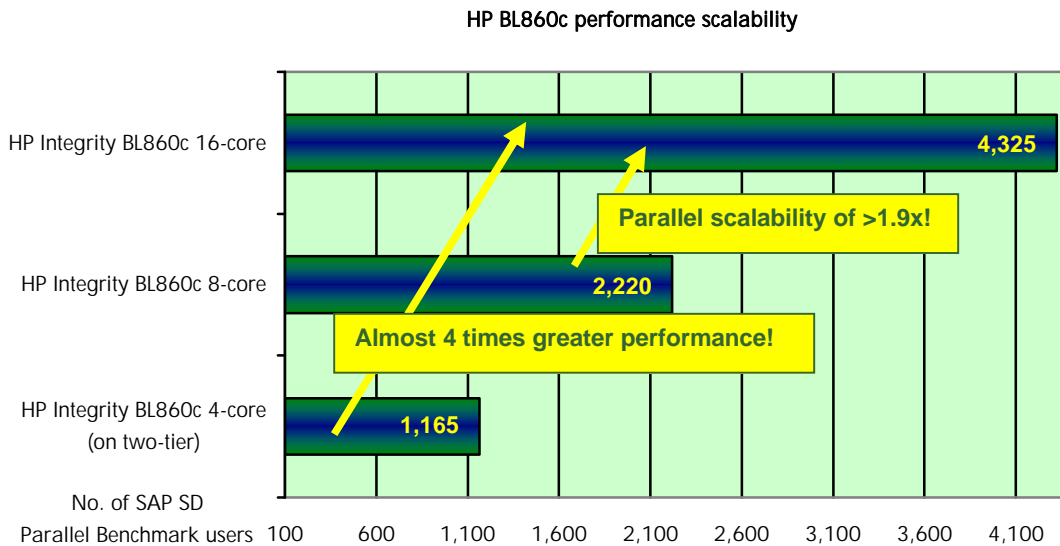
## Excellent performance scalability with HP Integrity BL860c

In addition to demonstrating outstanding performance with 1,165 SAP SD Benchmark users on the two-tier SAP SD Standard Application Benchmark, the HP Integrity BL860c server blade displayed excellent scalability with its 8-core and 16-core configurations on the SAP SD-Parallel Standard Application Benchmark running HP-UX and Oracle RAC.

The server blades showed a greater than 1.9x initial increase in performance when they achieved 4,325 SAP SD Benchmark users (21,700 SAPS) on the 16-core (4 blade) benchmark when compared to the 8-core (2 blade) result of 2,220 SAP SD Benchmark users (11,150 SAPS).

All results as of 09-22-08. Details in Appendix A.

Table 3. HP Integrity BL860c server blade performance scalability results on the SAP SD-Parallel Standard Application Benchmark.



## HP Integrity BL860c server blade testing configurations

Tests were performed on the HP Integrity BL860c server blade by the SAP Performance Engineering Lab in Cupertino, CA. HP received certification from SAP AG of the results on the two-tier SAP SD Standard Application Benchmark and the SAP SD-Parallel Standard Application Benchmarks for the Integrity BL860c on September 22, 2008.

Two-tier SAP SD Standard Application Benchmark. The Integrity BL860c server blade (Certification #2008052) was configured as a two-processor system with two 1.66GHz Dual-Core Intel® Itanium® processors 9100 series (2 processors/4 cores/ 8 threads), with 32KB level one cache, 1.25MB L2 cache, and 9MB L3 cache per core, and 24GB main memory. The server was running HP-UX 11i v3 and the SAP ERP application Release 6.0. The HP Integrity BL860c server blade achieved 1,165 SAP SD Benchmark users, equivalent to a throughput of 117,000 fully processed order line items per hour or 5,850 SAPS.

Three-tier, 8-core SAP SD-Parallel Standard Application Benchmark. Included two Integrity BL860c server blades (Certification #2008053), each configured as a two-processor system with two 1.66GHz Dual-Core Intel Itanium processors 9100 series (2 processors/4 cores/8 threads), with 32KB level one cache, 1.25MB L2 cache, and 9MB L3 cache per core, and 24GB main memory. The servers were running HP-UX 11i v3, Oracle 10G Real Application Clusters (RAC), and the SAP ERP 6.0. The HP Integrity BL860c server blades achieved 2,220 SAP SD Benchmark users, equivalent to a throughput of 223,000 fully processed order line items per hour or 11,150 SAPS.

Three-tier, 16-core SAP SD-Parallel Standard Application Benchmark. Included four Integrity BL860c server blades (Certification #2008054), each configured as a two-processor system with two 1.66GHz Dual-Core Intel Itanium processors 9100 series (2 processors/4 cores/8 threads), with 32KB level one cache, 1.25MB L2 cache, and 9MB L3 cache per core, and 24GB main memory. The server was running HP-UX 11i v3, Oracle 10G Real Application Clusters (RAC), and the SAP ERP 6.0. The HP Integrity BL860c server blade achieved 4,325 SAP SD Benchmark users, equivalent to a throughput of 434,000 fully processed order line items per hour or 21,700 SAPS.

All results as of 09-22-2008. Details can be found at <http://www.sap.com/benchmark>

## The Integrity Advantage

### HP Integrity 860c server blade

The HP Integrity BL860c server blade brings the superior reliability, availability and scalability of HP Integrity servers including support for HP's award winning HP-UX and OpenVMS operating environments to the BladeSystem c-Class. Designed to support mission critical application demands, the HP Integrity BL860c server blade brings the industry leading reliability, availability and security found in all HP Integrity servers to HP BladeSystem c-Class. The BL860c offers Dual-Core Intel Itanium processing power, impressive expansion, and management tools that make it easy to deploy and maintain.

The Integrity BL860c server blade key benefits include:

- [Brings unparalleled reliability and availability](#)
- [Brings HP Integrity Virtual Server Environment to c-Class](#)
- [Complements BladeSystem c-Class](#)

## The HP difference

HP provides all of the tools and services required for customers to plan their deployment of the SAP ERP application as well as the best practices and experience to help implement the application successfully without disruption to business operations. Thousands of deployments of SAP solutions worldwide run mission-critical environments on HP servers.

Unlike many other service providers, HP Services shares with customers its solid expertise in HP technology for flexible management, virtualization, consolidation, and integration of SAP solution-based environments.

In addition, HP is a global SAP partner offering leading support for SQL implementations. HP's SAP Consulting and Integration services practice also has strong expertise with SAP solution-based deployments, and hundreds of successful customer implementations.

## SAP and HP Partnership

HP has been partnering with SAP AG for over 20 years and is one of the largest SAP customers in the world. In fact, SAP selected HP output management technology. Together, SAP and HP created a remarkable legacy providing world-class business solutions to global clients. They offer a unique combination of open, flexible technologies and broad expertise. That's why nearly half of the worldwide implementations of SAP applications run on HP infrastructure.

- HP servers host almost 50% of all SAP solution-based installations with more than 60,000+ installations and more than 25,000 customers.
- HP is a worldwide leader in SAP operations, with 250+ outsourcing customers managing over 850,000 users.
- We integrate, certify, and optimize new solutions by utilizing:
  - Six SAP Solutions Centers located in Atlanta, Georgia and Houston, Texas, USA; and in Asia in Singapore, India, China, and Korea.
  - One SAP Competency Center, Walldorf, Germany.
  - 24x7 support through globally-connected SAP support centers in more than 15 countries worldwide.
  - Four engineering labs located in Walldorf, Germany; Houston, Texas, USA; Marlborough, MA., USA; and Redmond, Washington, USA.
- HP uses SAP solutions for enterprise resource planning and supply chain management.
- HP's output management technology is a proven and recommended platform for output management in the context of SAP solutions.
- HP has been awarded SAP's highest level of partnership in 3 out of 4 key areas, including HP's SAP customer support process.<sup>ii</sup>

## For more information

HP Integrity BL860c: [www.hp.com/go/bl860c](http://www.hp.com/go/bl860c)

SAP benchmark details: <http://www.sap.com/benchmark>

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# Appendix A

vs. Integrity BL860c server blade:

**Egenera BladeFrame Model PB30004R results on the two-tier SAP SD Standard Application Benchmark.** The Egenera BladeFrame PB30004R (Certification #2007004) was configured as a 2-processor server (2 processors/4 cores/4 threads) with Dual-Core Intel Xeon Processors 5160 3.0GHz with 32KB L1 cache per core and 4MB L2 cache per processor, and 16GB main memory. The server was running SAP ERP 6.0 with Microsoft Windows Server 2003 Enterprise Edition operating system and Microsoft SQL Server 2005 database and achieved 1,110 SAP SD Benchmark users, equivalent to a throughput of 112,330 fully processed line items per hour and 5,620 total SAPS.

**Fujitsu Siemens PRIMERGY BFi20 S2 results on the two-tier SAP SD Standard Application Benchmark.** The Fujitsu Siemens PRIMERGY BFi20 S2 (Certification #2007005) was configured as a 2-processor server (2 processors/4 cores/4 threads) with Dual-Core Intel Xeon Processors 5160 3.0GHz with 32KB L1 cache per core and 4MB L2 cache per processor, and 16GB main memory. The server was running SAP ERP 6.0 with Microsoft Windows Server 2003 Enterprise Edition operating system and Microsoft SQL Server 2005 database and achieved 1,110 SAP SD Benchmark users, equivalent to a throughput of 111,670 fully processed line items per hour and 5,580 total SAPS.

**Hitachi Blade Symphony A51A3 results on the two-tier SAP SD Standard Application Benchmark.** The Hitachi Blade Symphony A51A4 (Certification #2007001) was configured as a 2-processor server (2 processors/4 cores/4 threads) with Dual-Core Intel Xeon Processors 5160 3.0GHz with 32KB L1 cache per core and 4MB L2 cache per processor, and 16GB main memory. The server was running SAP ERP 6.0 with Microsoft Windows Server 2003 Enterprise Edition operating system and Microsoft SQL Server 2005 database and achieved 970 SAP SD Benchmark users, equivalent to a throughput of 101,670 fully processed line items per hour and 5,080 total SAPS.

## Integrity BL860c scalability configurations and results on the SAP SD-Parallel Standard Application Benchmark

**Integrity BL860c 8-core.** The HP Integrity BL860c (Certification #2008053) was configured with two Integrity BL860c server blades (2 processors/4 cores/8 threads) with two 1.66GHz Dual-Core Intel Itanium processors 9100 series (2 processors/4 cores/8 threads), with 32KB level one cache, 1.25MB L2 cache, and 9MB L3 cache per core, and 24GB main memory. The servers were running HP-UX 11i v3, Oracle 10G Real Application Clusters (RAC), and the SAP ERP 6.0. The HP Integrity BL860c server blades achieved 2,220 SAP SD Benchmark users, equivalent to a throughput of 223,000 fully processed order line items per hour or 11,150 SAPS.

**Integrity BL860c 16-core.** The HP Integrity BL860c (Certification #2008054) was configured with four Integrity BL860c server blades (2 processors/16 cores/8 threads) with two 1.66GHz Dual-Core Intel Itanium processors 9100 series (2 processors/4 cores/8 threads), with 32KB level one cache, 1.25MB L2 cache, and 9MB L3 cache per core, and 24GB main memory. The server was running HP-UX 11i v3, Oracle 10G Real Application Clusters (RAC), and the SAP ERP 6.0. The HP Integrity BL860c server blade achieved 4,325 SAP SD Benchmark users, equivalent to a throughput of 434,000 fully processed order line items per hour or 21,700 SAPS.

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<sup>i</sup> <http://h71028.www7.hp.com/ERC/downloads/4AA1-1487ENW.pdf>

<sup>ii</sup> <http://h71028.www7.hp.com/ERC/downloads/4AA0-9971ENW.pdf> and <http://h71028.www7.hp.com/enterprise/cache/13419-0-0-121.html>