HP ProLiant BL680c G5 shows excellent performance result on two-tier SAP® Sales and Distribution Standard Application Benchmark with SAP enhancement package 4 for SAP ERP 6.0

HP leadership with ProLiant servers

The HP ProLiant BL680c G5 Server Blade delivers no-compromise performance and expansion for a 2-core to 6-core four-processor BladeSystem server. With two or four Intel® Xeon® 7200, 7300, or 7400 series processors, 128GB of fully buffered memory, two hot-plug serial attached SCSI (SAS) or serial ATA (SATA) hard drives, four embedded Gigabit Ethernet adapters, and three I/O expansion slots, the HP ProLiant BL680c G5 delivers the density you want with the performance you need to handle the most demanding enterprise class applications.

With this highly scalable feature set, the ProLiant BL680c G5 is an ideal choice for the growing enterprise class database, consolidation, and virtualization environments seeking to improve server utilization and reduce server sprawl, while continuing to leverage all the familiar and easy-to-use ProLiant management tools and options.

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

SAP Standard Application Benchmarks test the hardware and database performance of SAP applications and components.

HP ProLiant servers have proven to be reliable and cost-effective. HP servers host nearly half of all installations of SAP solutions, with more than 60,000 installations and 25,000 customers.

HP’s strong technology capabilities are demonstrated through the results of these benchmarks.

As one of the largest technology partners for SAP, HP is a global technology partner, software solution partner, global alliance support partner, global services partner, and global hosting partner. HP ProLiant servers consistently earn leading results on the two-tier SAP SD Standard Application Benchmark.

All results as of 08-04-2009. Details can be found at http://www.sap.com/benchmark.

Key Points

- The HP ProLiant BL680c G5 showed its four processor performance proficiency with outstanding results on the two-tier SAP® Sales and Distribution (SD) Standard Application Benchmark running on the SAP enhancement package 4 for the SAP ERP application Release 6.0 on Windows, achieving 3,058 SAP SD Benchmark users with 16,680 SAPS.

- Utilizing the HP exclusive 90 watt Intel® Xeon® X7458, this score outperforms the NEC Express5800 Model R140a-R, this score compares to the X7460 at 130 watts. No other server boasts the capability to support the Intel® Xeon® E7458 processor.

- The ProLiant BL680c G5 offers more performance, less power, and greater server density than the NEC Express5800 R140a-R.

All results as of 08-04-09. Details in Appendix A.

THE HP ADVANTAGE

With the ProLiant BL680c G5®

- Intel® Xeon® E7458 EXCLUSIVE

  More performance, less power

  Greater server density

- No other vendor utilizes the high performing Intel Xeon E7458 processor.

- The ProLiant BL680c G5 provides greater performance and energy efficiency with the E7458 90W processor. The NEC Express5800 R140a-R utilized the lower performing, higher wattage X7460 130W processor.

- The BladeSystem c7000 blade enclosure allows eight BL680c G5 servers per 10U of rack space (up to a total of 24 processors, 144 cores, and 1.0TB of memory). The 4U NEC server would take a 32U rack space (3.2 times greater) to get the same number of processors and memory capacity but using more power.
In 2008, more than half of all new systems running SAP solutions were installed with Microsoft Windows. And more than half of the new installations of SAP applications on Windows were installed on Microsoft SQL Server. HP servers host nearly half of all installations of SAP solutions, with more than 60,000 installations and 25,000 customers. These figures show that HP, with SAP, has a leading market share with SAP solutions on Microsoft Windows and Microsoft SQL Server.

How we did it

The SAP SD Standard Application Benchmark was performed on July 23, 2009, by HP, in Houston, Texas, on the HP ProLiant BL680c G5 server blade with the SAP enhancement package 4 for SAP ERP 6.0 and the usage of Microsoft Windows Server 2008 Enterprise Edition and Microsoft SQL Server 2008. The HP ProLiant BL680c G5 achieved 3,058 SAP SD Benchmark users, equivalent to a throughput of 333,670 fully processed order line items per hour or 16,680 SAPS. HP received certification from SAP AG of the results on the two-tier SAP SD Standard Application Benchmark for the ProLiant BL680c G5. (certification # 2009032).

The ProLiant BL680c G5 was set up as a four processor system with four 2.4GHz 6-core Intel Xeon E7458 processors (4 processors/24 cores/24 threads), with 16MB L3 cache per processor, and 64GB (16 x 4GB) main memory. The server was running Microsoft Windows Server 2008 Enterprise Edition operating system, Microsoft SQL Server 2008 database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The server also utilized 1 x Smart Array P400i/512MB Controller with battery-backed write cache connected to 2 x 72GB 15K SAS internal drives, and 1 x QLogic Fiber Channel mezzanine card connected to an HP MSA2012fc with 12 x 146GB 15K SAS external drives.

All results as of 08-04-2009; details can be found at http://www.sap.com/benchmark.

Outperforming the competition

Table 1. HP ProLiant four processor server vs. NEC competitor four processor server results on the two-tier SAP SD Standard Application Benchmark for four processor servers running SAP enhancement package 4 for SAP ERP 6.0.2

<table>
<thead>
<tr>
<th>Server</th>
<th>HP ProLiant BL680c G5</th>
<th>NEC Express5800 Model R140a-R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration</td>
<td>6-core Intel Xeon E7458 2.4GHz, 90 watts</td>
<td>6-core Intel Xeon X7460 2.66GHz, 130 watts</td>
</tr>
<tr>
<td></td>
<td>4 processors/ 24 cores/ 24 threads</td>
<td>4 processors/ 24 cores/ 24 threads</td>
</tr>
<tr>
<td></td>
<td>64GB main memory; MS Windows Server 2008 Enterprise Edition</td>
<td>64GB main memory; MS Windows Server 2008 Enterprise Edition</td>
</tr>
<tr>
<td>SAP SD Benchmark Users</td>
<td>3,058</td>
<td>2,957</td>
</tr>
<tr>
<td>SAPS</td>
<td>16,680</td>
<td>16,170</td>
</tr>
</tbody>
</table>
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.

The HP ProLiant Advantage

Designed to keep pace with strenuous computing demands, the HP ProLiant BL680c G5 Server Blade is equipped with outstanding 4P processing power and expansion capabilities, enterprise-class availability features, and industry-leading management tools that make it easy to deploy and maintain.

Ideal for hosting larger databases, applications, and many virtual machines, the HP ProLiant BL680c G5 delivers no-compromise performance and expansion in a compact 4P server blade form factor.

No-compromise performance and expansion

• Outstanding performance from a 4P server blade form factor, including 2-core to 6-core Intel Xeon 7000 series processors, extensive memory capacity, and best-in-class networking.

Design and availability

• Proven ProLiant design and availability features you can depend on.

Industry-leading management and configuration tools

• Industry-leading management and configuration tools, superior virtualization configuration and control, remote administration, superb life cycle management, and resource utilization.

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 nearly half 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 solution-based 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, and one SAP Competency Center in Walldorf, Germany.
  – 24x7 support through globally connected support centers in support of SAP solutions in more than 15 countries worldwide.
  – Four engineering labs located in Walldorf, Germany; Houston, Texas, USA; Marlborough, MA., USA; and Redmond, Washington, USA.
Appendix A

1Configuration details from Figure 1

HP ProLiant BL680c G5 results on the two-tier SAP SD Standard Application Benchmark. The HP ProLiant BL680c G5 (certification #2009032) was configured as a four processor server with four 6-core 2.4GHz Intel Xeon E7458 processors (4 processors/24 cores/24 threads), with 64KB L1 cache per core, 3MB L2 cache per 2 cores, 16MB L3 cache per processor, and 64GB main memory. The server was running Microsoft Windows Server 2008 Enterprise Edition operating system, Microsoft SQL Server 2008 database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The HP ProLiant BL680c G5 achieved 3,058 SAP SD Benchmark users, equivalent to a throughput of 333,670 fully processed order line items per hour or 16,680 SAPS.

All results as of 08-04-2009; details can be found at http://www.sap.com/benchmark.

2Configuration details from Table 1

NEC Express5800 Model R140a-4 results on the two-tier SAP SD Standard Application Benchmark. The NEC Express5800 Model R140a-4 (certification #2009018) was configured as a four-processor server with four Six-Core 2.66GHz Intel Xeon X7460 processors (4 processors/24 cores/24 threads), with 64KB L1 cache per core, 3MB L2 cache per 2 cores, 16MB L3 cache per processor, and 64GB main memory. The server was running Microsoft Windows Server 2008 Enterprise Edition operating system, Microsoft SQL Server 2008 database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The NEC Express5800 Model R140a-4 achieved 2,957 SAP SD Benchmark users, equivalent to a throughput of 323,330 fully processed order line items per hour or 16,170 SAPS.

All results as of 08-04-2009; details can be found at http://www.sap.com/benchmark.