HP ProLiant: Taking it to the limit one more time

HP ProLiant DL585 G6 prevails with #1 four-processor 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 latest HP ProLiant DL585 G6 rack server is a highly manageable, rack optimized, four-socket server designed for maximum performance in an industry standard architecture. The large 256GB footprint and nine expansion slots provide the memory and I/O scalability customers need to support multiple applications or virtual machines on a single physical server. The large memory capacity also provides an ideal platform for EDA, financial, and petrochemical applications that demand lots of memory.

With this highly scalable feature set, the ProLiant DL585 G6SA 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.

Customer value

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.

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.

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.

All results as of 07-10-2009. Details can be found at http://www.sap.com/benchmark.

Technology for better business outcomes.

Key Points

- The HP ProLiant DL585 G6 earned a #1 four-processor performance result 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 4,665 SAP SD Benchmark users with 25,530 SAPS.
- This score outperforms four-processor competitors such as IBM, Dell, and NEC displaying increased performance by up to more than twice the other scores.
- The result also eclipses an eight-processor NEC server, showing an increased performance of 4%.
- The HP ProLiant DL585 G6 and the HP ProLiant BL685c G6 take the top scores for four-processor performance on the two-tier SAP SD Standard Application Benchmark running on the SAP enhancement package 4 for the SAP ERP application Release 6.0 on Windows, showing marked performance scalability.

All results as of 07-10-09. Details in Appendix A.

Figure 1. HP ProLiant servers hold the best four-processor performance results on two-tier SAP SD Standard Application Benchmark for servers running SAP enhancement Package 4 for SAP ERP 6.0.1
The Market Leadership Advantage of Solutions from HP and SAP

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.

What’s New

The SAP SD Standard Application Benchmark was performed on June 29, 2009, by HP, in Houston, Texas, on the HP ProLiant DL585 G6 rack server with the new SAP enhancement package to the SAP SD Standard Application Benchmark and the usage of Microsoft Windows Server 2008 Enterprise Edition x64 and Microsoft SQL Server 2008 Enterprise Edition x64. The HP ProLiant DL585 G6 achieved 4,665 SAP SD Benchmark users, equivalent to a throughput of 510,670 fully processed order line items per hour or 25,530 SAPS. HP received certification from SAP AG of the results on the two-tier SAP SD Standard Application Benchmark for the ProLiant DL585 G6. (Certification #2009025).

The ProLiant DL585 G6 rack server was set up as a four-processor system with four 2.8GHz 6-Core AMD Opteron 8439 SE Processors (4 processors/24 cores/24 threads), with 128KB L1 cache and 512KB L2 cache per core, 6MB L3 cache per processor, and 64GB main memory. The server was running Microsoft Windows Server 2008 Enterprise Edition x64 operating system, Microsoft SQL Server 2008 Enterprise Edition x64 database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The server also utilized 1 x Smart Array P400 Controller connected to 8 x 72GB 15K SAS internal drives, and 1 x Smart Array P800 Controller connected to an HP MSA70 with 25 x 72GB 15K SAS external drives.

All results as of 07-10-2009; details can be found at http://www.sap.com/benchmark.

Outperforming the competition by up to TWO TIMES SAP SD Benchmark Users

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Table 1. HP ProLiant four processor server vs. competitor four-processor servers and eight-processor NEC. HP shows over twice the performance advantage on the two-tier SAP SD Standard Application Benchmark for four-processor servers running SAP enhancement Package 4 for SAP ERP 6.0.
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

The ProLiant DL585 G6 improves on its reputation for performance with faster processors, more memory, and additional storage options to deliver more value than ever before. Combined with industry-leading management and support options, the DL585 G6 is a great choice for today’s demanding enterprise applications and virtualization projects. The ProLiant DL585 G6 now includes:

- Support for AMD’s latest Opteron 8400 series processors for improved performance, price/performance, and TCO.
- Support for 8GB PC2-6400 Registered DIMMs on select models.
- Support for the AMD Opteron 8439 SE for maximum flexibility.

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.
For more information

HP ProLiant BL685c G6:  [www.hp.com/servers/proliantbl685-g6](http://www.hp.com/servers/proliantbl685-g6)

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Appendix A

1Configuration details from Figure 1

HP ProLiant DL585 G6 results on the two-tier SAP SD Standard Application Benchmark. The HP ProLiant DL585 G6 (Certification #2009025) was configured as a four-processor server with four 2.8GHz 6-Core AMD Opteron 8439 SE Processors (4 processors/24 cores/24 threads), with 128KB L1 cache, 512KB L2 cache per core, 6MB L3 cache per processor, and 64GB main memory. The server was running Microsoft Windows Server 2008 Enterprise Edition x64 operating system, Microsoft SQL Server 2008 Enterprise Edition x64 database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The HP ProLiant DL585 G6 achieved 4,665 SAP SD Benchmark users, equivalent to a throughput of 510,670 fully processed order line items per hour or 25,530 SAPS.

HP ProLiant DL585 G6 results on the two-tier SAP SD Standard Application Benchmark. The ProLiant BL685c G6 server blade (Certification #2009021) was set up as a four-processor system with four 2.6GHz 6-Core AMD Opteron Model 8435 processors (4 processors/24 cores/24 threads), with 128KB L1 cache and 512KB L2 cache per core, 6MB L3 cache per processor, and 64GB main memory. The server was running Microsoft Windows Server 2008 Enterprise Edition operating system, Microsoft SQL Server 2008 Enterprise Edition database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The HP ProLiant DL585 G6 achieved 4,422 SAP SD Benchmark users, equivalent to a throughput of 484,670 fully processed order line items per hour or 24,230 SAPS.

HP ProLiant DL585 G6 results on the two-tier SAP SD Standard Application Benchmark. The ProLiant BL685c G6 server blade (Certification #2009007) was set up as a four-processor system with four 2.9GHz Quad-Core AMD Opteron Model 8393 SE Processors (4 processors/16 cores/16 threads), with 128KB L1 cache, 512KB L2 cache per core, 6MB L3 cache per processor, and 64GB (16 x 4GB) Registered DDR2 main memory. The server was running Microsoft Windows Server 2008 Enterprise Edition operating system, Microsoft SQL Server 2008 Enterprise Edition database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The HP ProLiant DL585 G6 achieved 4,340 SAP SD Benchmark users, equivalent to a throughput of 374,670 fully processed order line items per hour or 18,730 SAPS.

HP ProLiant DL685c G6 results on the two-tier SAP SD Standard Application Benchmark. The ProLiant BL685c G6 server blade (Certification #2009000) was set up as a four-processor system with four 3.1GHz Quad-Core AMD Opteron 8393 SE Processors (4 processors/16 cores/16 threads), with 128KB L1 cache, 512KB L2 cache per core, 6MB L3 cache per processor, and 64GB (16 x 4 GB) Registered DDR2 main memory. The server was running Microsoft Windows Server 2008 Enterprise Edition operating system, Microsoft SQL Server 2008 Enterprise Edition database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The ProLiant BL685c G6 achieved 3,118 SAP SD Benchmark users, equivalent to a throughput of 341,670 fully processed order line items per hour or 17,050 SAPS.

Configuration details from Table 1

NEC Express5800 A1160 results on the two-tier SAP SD Standard Application Benchmark. The NEC Express5800 A1160 (Certification #2009001) was configured as an eight-processor server with eight 2.66GHz Intel Xeon X7460 processors (8 processors/48 cores/48 threads), with 64KB L1 cache per core, 3MB L2 cache per 2 cores, 16MB L3 cache per processor, and 256GB main memory. The server was running Microsoft Windows Server 2008 Datacenter Edition operating system, Microsoft SQL Server 2008 Enterprise Edition database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The NEC Express5800 A1160 achieved 4,485 SAP SD Benchmark users, equivalent to a throughput of 505,670 fully processed order line items per hour or 25,280 SAPS.

IBM System 550 results on the two-tier SAP SD Standard Application Benchmark. The IBM System 550 (Certification #2009023) was set up as a four-processor system with four 5GHz POWER6 processors (4 processors/8 cores/16 threads), with 128 KB L1 cache, 4MB L2 cache per core, 32MB L3 cache per processor, and 64GB main memory. The server was running AIX 6.1 operating system, DB2 9.5 database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The IBM System 550 achieved 3,752 SAP SD Benchmark users, equivalent to a throughput of 410,330 fully processed order line items per hour or 20,520 SAPS.

NEC Express5800 R140a-4 results on the two-tier SAP SD Standard Application Benchmark. The NEC Express5800 R140a-4 (Certification #2009018) was configured as a four-processor server with four 2.66GHz Intel Xeon X7460 processors (4 processors/24 cores/24 threads), with 64KB L1 cache, 3MB L2 cache per core, 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 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.

Dell PowerEdge M905 results on the two-tier SAP SD Standard Application Benchmark. The Dell PowerEdge M905 (Certification #2009017) was configured as a four-processor server with four 2.7GHz Quad-Core AMD Opteron 8384 processors (4 processors/16 cores/16 threads), with 128KB L1 cache, 512KB L2 cache per core, 6MB L3 cache per processor, and 96GB main memory. The server was running Microsoft Windows Server 2003 Enterprise Edition operating system, Microsoft SQL Server 2005 database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode). The Dell PowerEdge M905 achieved 2,129 SAP SD Benchmark users, equivalent to a throughput of 235,330 fully processed order line items per hour or 11,770 SAPS.