HP ProLiant DL785 G6 new generation server extends its #1 overall performance leadership 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 DL785 G6 rack server, the most expandable server in the award-winning HP ProLiant line, is an 8-socket server supporting up to 8 AMD Opteron™ Six-Core processors, 512 GB of memory and 11 PCIe I/O slots. The large memory capacity provides an ideal platform for EDA, financial, and petrochemical applications that demand lots of memory. With this highly scalable feature set the DL785 G6 is an ideal choice for the growing enterprise class database, consolidation, and virtualization environments, while continuing to leverage all the familiar and easy-to-use ProLiant management tools and options.

**Customer value**

Q. 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 almost 50% 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 08-03-2009. Details can be found at [http://www.sap.com/benchmark](http://www.sap.com/benchmark).

**Technology for better business outcomes**

- #1 overall performance result on the two-tier SAP Sales and Distribution (SD) Standard Application Benchmark with SAP enhancement package 4 for the SAP ERP 6.0 application.
- #1 eight-processor result on the two-tier SAP SD Standard Application Benchmark with SAP enhancement package 4 for SAP ERP 6.0.
- Performance increase of 28% as compared to the 8-processor Sun Fire X4600 M2 and 3% increase as compared to the 16-processor NEC Express Model A1160 result on the two-tier SAP SD Standard Application Benchmark with SAP enhancement package 4 for SAP ERP 6.0.
- Shows excellent performance scaling across the HP ProLiant family, between two-processor, four-processor, and eight-processor servers on the two-tier SAP SD Standard Application Benchmark with SAP enhancement package 4 for SAP ERP 6.0. See the chart on page 2 for details.
- Performance increase of 40% as compared to the DL785 G5 result on the two-tier SAP SD Standard Application Benchmark with SAP enhancement package 4 for SAP ERP 6.0.

Figure 1. Several results on two-tier SAP SD Standard Application Benchmark for servers running SAP enhancement package 4 for SAP ERP 6.0 (comparative details in Appendix)

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8P NEC Express 5800 Model A1160
8P Sun Fire X4600 M2
8P HP ProLiant DL785 G6
8P Sun SPARC Enterprise T5440
8P NEC Express 5800 A1160
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Outperforms the 16P Competition by 3% and the 8P Competition up to 28%

- 42,250 SAPS
- 41,070 SAPS
- 33,230 SAPS
- 30,180 SAPS
- 25,830 SAPS

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16P NEC Express 5800 Model A1160
8P HP ProLiant DL785 G6
8P NEC Express 5800 A1160
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All results as of 08-03-2009. Details in Appendix.
ProLiant server testing configuration

HP received certification from SAP AG of the results on the two-tier SAP SD Standard Application Benchmark for the ProLiant DL785 G6 (Certification #2009030).

The ProLiant DL785 G6 rack server was set up as an eight-processor system with eight 2.8-GHz 6-Core AMD Opteron Processors Model 8439SE (8 processors/48 cores/48 threads), with 128 KB L1 cache and 512 KB L2 cache per core, 6MB L3 cache per processor, and 192 GB (48 x 4 GB) 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 DL785 G6 achieved 7,716 SAP SD Benchmark users, equivalent to a throughput of 845,000 fully processed order line items per hour or 42,250 SAPS.

All results as of 08-03-2009; details can be found at [http://www.sap.com/benchmark](http://www.sap.com/benchmark).

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 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 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.

Appendix

1Configuration details from Figure 1 versus ProLiant DL785 G6 server

NEC Express5800 Model A1160 results on the two-tier SAP SD Standard Application Benchmark. The NEC Express5800 A1160 (Certification #2009016) was configured as a 16-processor server (16 processors/96 cores/96 threads) with Intel Xeon Processors X7460 2.66 GHz with 64 KB L1 cache, 3 MB L2 cache per 2 cores, and 16 MB L3 cache per processor, and 512 GB main memory. The NEC Express5800 A1160 was running Microsoft Windows Server 2008 Datacenter Edition operating system, Microsoft SQL Server 2008 database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode) and achieved 7,500 SAP SD Benchmark users, equivalent to a throughput of 821,330 fully processed line items per hour and 41,070 total SAPS.

Sun Fire X4600 M2 results on the two-tier SAP SD Standard Application Benchmark. The Sun Fire X4600 M2 (Certification #2009022) was configured as an 8-processor server (8 processors/32 cores/32 threads) with Quad-Core AMD Opteron Processors 8384 2.7 GHz with 128 KB L1 cache, 512 MB L2 cache per core, and 6 MB L3 cache per processor, and 256 GB main memory. The Sun Fire X4600 M2 was running Solaris 10 operating system, MaxDB database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode) and achieved 6,050 SAP SD Benchmark users, equivalent to a throughput of 664,670 fully processed line items per hour and 33,230 total SAPS.

HP ProLiant DL785 G5 results on the two-tier SAP SD Standard Application Benchmark. The HP ProLiant DL785 G5 (Certification #2009009) was configured as an 8-processor server (8 processors/32 cores/32 threads) with Quad-Core AMD Opteron Model 8393 Processors 3.1 GHz 128 KB L1 cache and 512 KB L2 cache per core, 6MB L3 cache per processor, and 128 GB (32 x 4 GB) main memory. The HP ProLiant DL785 G5 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) and achieved 5,518 SAP SD Benchmark users, equivalent to a throughput of 603,670 fully processed line items per hour and 30,180 total SAPS.

Sun SPARC Enterprise T5440 results on the two-tier SAP SD Standard Application Benchmark. The Sun SPARC Enterprise T5440 (Certification #2009026) was configured as a 4-processor server (4 processors/32 cores/256 threads) with Eight-Core UltraSPARC T2 Plus Processors 1.6 GHz with 8 KB (D) + 16 KB (I) L1 cache per core, 4 MB L2 cache per core, and 4 MB L2 cache per processor, and 256 GB main memory. The Sun SPARC Enterprise T5440 was running Solaris 10 operating system, Oracle 10g database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode) and achieved 4,720 SAP SD Benchmark users, equivalent to a throughput of 516,670 fully processed line items per hour and 25,830 total SAPS.

NEC Express5800 A1160 results on the two-tier SAP SD Standard Application Benchmark. The NEC Express5800 A1160 (Certification #2009001) was configured as an 8-processor server (8 processors/48 cores/48 threads) with Intel Xeon Processors X7460 2.66 GHz with 64 KB L1 cache, 3 MB L2 cache per 2 cores, and 16 MB L3 cache per processor, and 256 GB main memory. The NEC Express5800 A1160 was running Microsoft Windows Server 2008 Datacenter Edition operating system, Microsoft SQL Server 2008 database, and the SAP enhancement package 4 for SAP ERP 6.0 (Unicode) and achieved 4,485 SAP SD Benchmark users, equivalent to a throughput of 505,670 fully processed line items per hour and 25,280 total SAPS.
Configuration details from Figure 2 versus ProLiant DL785 G6 server

HP ProLiant DL585 G6 results on the two-tier SAP SD Standard Application Benchmark. The HP ProLiant DL585 G5 (Certification #2009025) was configured as a 4-processor server (4 processors/24 cores/24 threads) with Six-Core AMD Opteron Model 8439SE Processors 2.8 GHz with 128 KB L1 cache and 512 KB L2 cache per core, 6MB L3 cache per processor, and 64 GB (16 x 4 GB) main memory. The HP ProLiant DL585 G5 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) and achieved 4,665 SAP SD Benchmark users, equivalent to a throughput of 510,670 fully processed line items per hour and 25,530 total SAPS.

HP ProLiant DL385 G6 results on the two-tier SAP SD Standard Application Benchmark. The HP ProLiant DL385 G6 (Certification #2009019) was configured as a 2-processor server (2 processors/12 cores/12 threads) with Six-Core AMD Opteron Model 2435 Processors 2.6 GHz with 128 KB L1 cache and 512 KB L2 cache per core, 6MB L3 cache per processor, and 32 GB (16 x 4 GB) main memory. The HP ProLiant DL385 G6 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) and achieved 2,350 SAP SD Benchmark users, equivalent to a throughput of 256,670 fully processed line items per hour and 12,830 total SAPS.

For more information
HP ProLiant DL785: www.hp.com/servers/proliantdl785
SAP benchmark details: http://www.sap.com/benchmark

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