



HP ProLiant DL385 G5p attains two-processor world record performance result on two-tier SAP® Sales and Distribution Standard Application Benchmark on Windows



HP Leadership with ProLiant servers



»The NEW HP ProLiant DL385 G5p rack server is designed with virtualization in mind, yet flexible to support any business need. It offers Quad-Core AMD Opteron processors with up to 6MB L3 Cache, doubles the features and options of the ProLiant DL385 G5, and provides iHV support with USB.

Customer Value

What are the benefits of using the HP ProLiant DL385 G5p server and SAP applications?

HP ProLiant servers consistently deliver excellent performance results on two-tier SAP SD Standard Application Benchmarks.

HP ProLiant servers have also proven to be reliable and cost-effective. HP servers host almost 50% of all installations of SAP solutions, with more than 55,000 installations and 20,000 customers.

The two-processor HP ProLiant DL385 G5p, running SAP applications, provides industry-leading management, performance, and availability for growing businesses. With the ability to run multiple operating systems and a full spectrum of redundancy features for best-in-class availability, the ProLiant DL385 G5p offers maximum flexibility and adaptability for future growth for customers' SAP solution-based environments.

Known as the "versatile, dependable workhouse", the ProLiant DL385 G5p maintains its dominant share in the Opteron 2U, 2P market with its innovative features and key options that allow for greater system scalability to support more users and bigger applications.

With the HP ProLiant DL385 G5p running SAP applications that optimize business operations, no matter where they're located or who they involve, customers can deliver their services while operating their environment—without compromising reliability, performance, or growth.

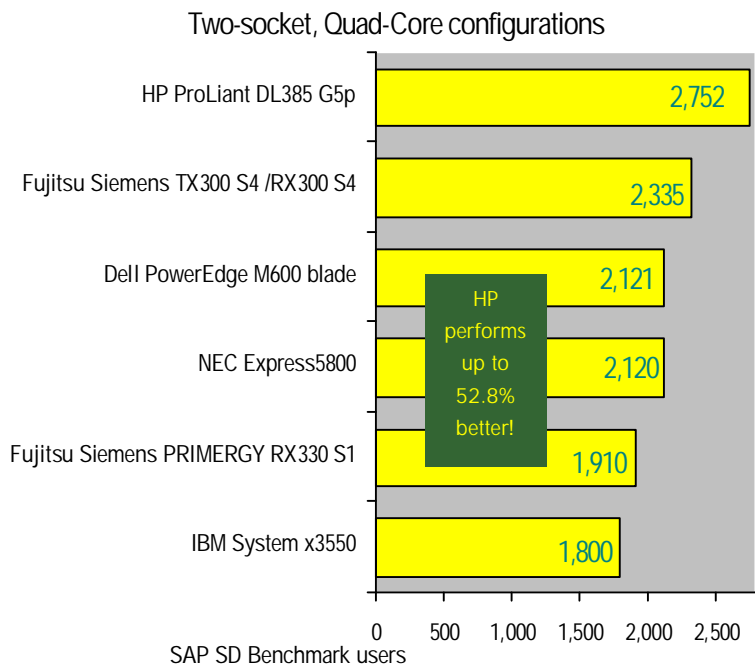
All results as of 11-14-2008. Details can be found at <http://www.sap.com/benchmark>

Key Points

The HP ProLiant DL385 G5p added another feather in its performance cap with its latest result as a two-processor world record performance leader running Windows on the two-tier SAP® Sales and Distribution (SD) Standard Application Benchmark. The HP ProLiant DL385 G5p recently achieved 2,752 SAP SD Benchmark users, beating competitors such as IBM, Dell, and Fujitsu Siemens, among others, by up to 52.8% in performance results.

In addition, the performance scalability for Quad-Core processors for the ProLiant DL385 G5p was 30.9% better when compared to its previous Quad-Core generation. See page 2 for details.

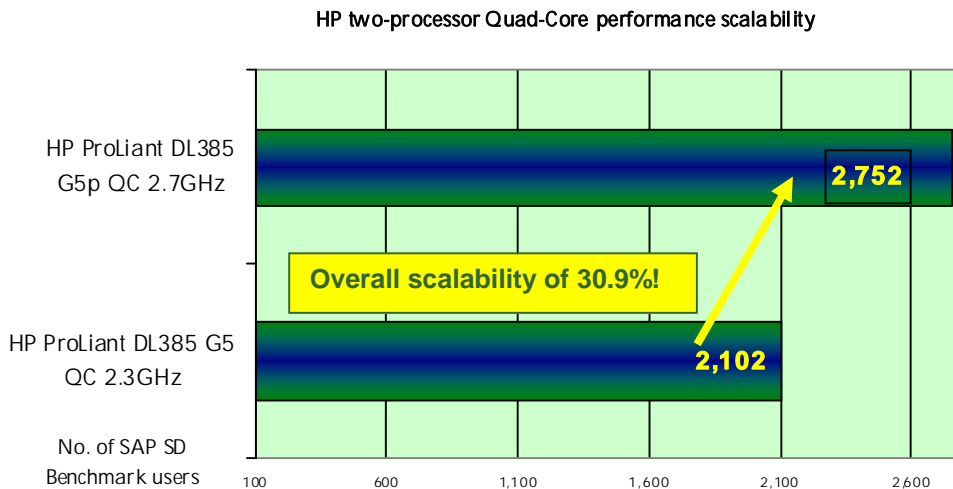
Table 1. HP ProLiant DL385 G5p two-socket Quad-Core results on Windows on the two-tier SAP SD Standard Application Benchmark. Configuration details can be found in Appendix A.



HP performance scalability increases with Quad-Core technology

In addition to achieving world record performance results with 2,752 SAP SD Benchmark users on the two-tier SAP SD Standard Application Benchmark on Windows, the ProLiant DL385 G5p rack server showed excellent two-processor performance scalability results with the next generation of Quad-Core processors. There was a 30.9% initial increase in performance when the server achieved 2,752 SAP SD Benchmark users (13,780 SAPS) for its Quad-Core result from its previous result of 2,102 SAP SD Benchmark users (12,180 SAPS).

Table 2. HP ProLiant DL385 G5p Quad-Core performance scalability results with the last generation.



ProLiant server testing configurations

The ProLiant DL385 G5p rack server was configured as a two-processor system with two 2.7GHz Quad-Core AMD Opteron 2384 Processors (2 processors/8 cores/8 threads), with 128KB L1 cache per core, 512KB L2 cache per core, and 6MB L3 cache per processor, and 32GB main memory. The server was running Microsoft Windows Server 2003 Enterprise Edition operating system, Microsoft SQL Server 2005 database, and the SAP ERP application Release 6.0. The HP ProLiant DL385 G5p achieved 2,752 SAP SD Benchmark users, equivalent to a throughput of 275,670 fully processed order line items per hour or 13,780 SAPS.

All results as of 11-14-2008. Certification number 2008065. Details can be found at <http://www.sap.com/benchmark>

The ProLiant Advantage

HP ProLiant DL385 G5p rack server

The new HP ProLiant DL385 G5p server offers twice the memory, double the NICs, and up to 16 drives than its previous generation. Powered by two Quad-Core AMD Opteron 2300 Series Processors with 6MB L3 cache, this server is the right fit for virtual perfection because it allows customers of all sizes, from a small business to a large enterprise, to deploy more virtual machines with confidence.

Key benefits include:

- Quad-Core AMD Opteron Performance for demanding scale-out applications and virtualization projects
- Ideal for virtualization with up to 16 DIMMs and 4 NICs
- Industry-leading management that enables powerful administration
- Engineered for reliability and ease of ownership

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.¹

For more information

HP ProLiant DL385 G5p: <http://www.hp.com/servers/proliantdl385>

HP ProLiant storage solutions: www.hp.com/go/serial and

<http://h18004.www1.hp.com/products/servers/platforms/storage.html>

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

Technology for better business outcomes.

Appendix A

Fujitsu Siemens PRIMERGY TX300 S4/RX300 S4 results on the two-tier SAP SD Standard Application Benchmark. The Fujitsu Siemens PRIMERGY TX300 S4/RX300 S4 (Certification #2007069) was configured as a 2-processor server (2 processors/8 cores/8 threads) with Quad-Core Intel Xeon Processors X5460 3.16GHz with 64KB L1 cache per core and 6MB L2 cache per 2 cores, and 32GB 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 2,335 SAP SD Benchmark users, equivalent to a throughput of 237,000 fully processed line items per hour and 11,850 total SAPS.

Dell PowerEdge M600 results on the two-tier SAP SD Standard Application Benchmark. The Dell PowerEdge M600 (Certification #2008043) was configured as a 2-processor server (2 processors/8 cores/8 threads) with Quad-Core Intel Xeon Processors E5460 3.16GHz with 64KB L1 cache per core and 6MB L2 cache per 2 cores, and 32GB 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 2,121 SAP SD Benchmark users, equivalent to a throughput of 217,000 fully processed line items per hour and 10,850 total SAPS.

NEC Express5800 results on the two-tier SAP SD Standard Application Benchmark. The NEC Express5800 (Certification #2008036) was configured as a 2-processor server (2 processors/8 cores/8 threads) with Quad-Core Intel Xeon Processors X5460 3.16GHz with 64KB L1 cache per core and 6MB L2 cache per 2 cores, and 48GB 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 2,120 SAP SD Benchmark users, equivalent to a throughput of 215,330 fully processed line items per hour and 10,770 total SAPS.

Fujitsu Siemens PRIMERGY RX330 S1 results on the two-tier SAP SD Standard Application Benchmark. The Fujitsu Siemens PRIMERGY RX330 S1 (Certification #2008037) was configured as a 2-processor server (2 processors/8 cores/8 threads) with Quad-Core AMD Opteron Processors 2356 2.3GHz with 128KB L1 cache, 512KB L2 cache per core and 2MB L3 cache per processor, and 32GB 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 1,910 SAP SD Benchmark users, equivalent to a throughput of 191,670 fully processed line items per hour and 9,580 total SAPS.

IBM System x3550 results on the two-tier SAP SD Standard Application Benchmark. The IBM System x3550 (Certification #2007044) was configured as a 2-processor server (2 processors/8 cores/8 threads) with Quad-Core Intel Xeon Processors X5355 2.66GHz with 64KB L1 cache per core and 4MB L2 cache per 2 cores, and 32GB 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 1,800 SAP SD Benchmark users, equivalent to a throughput of 180,000 fully processed line items per hour and 9,000 total SAPS.

ProLiant DL385 G5p Quad-Core scalability configuration and result on two-tier SAP SD Standard Application Benchmark

ProLiant DL385 G5p Quad-Core March 2008

The HP ProLiant DL385 G5p (Certification #2008015) was configured as a two-processor server (2 processors/8 cores/8 threads) with Quad-Core AMD Opteron 2356 Processors with 2.3GHz with 64KB L1 cache per core and 6MB L2 cache per 2 cores, and 32GB main memory. The HP ProLiant DL385 G5p was running SAP ERP 6.0 with Microsoft Windows Server 2003 Enterprise Edition operating system and Microsoft SQL Server 2005 database and achieved 2,102 SAP SD Benchmark users, equivalent to a throughput of 210,330 fully processed line items per hour and 10,520 total SAPS.