HP ProLiant DL380 G6 achieves #1 two-processor performance result on two-tier SAP® Sales and Distribution Standard Application Benchmark with SAP Enhancement Package 4 for SAP ERP 6.0 with Novell SUSE Linux

**Key Points**

- Continuing its legacy as a two-processor performance leader, the HP ProLiant DL380 G6 recently achieved 3,171 SAP SD Benchmark users with 17,380 SAPS with 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 Novell SUSE Linux Enterprise Server.

- This result defeated the Fujitsu Siemens PRIMERGY TX300 S4/ RX300 S4 two-socket Linux competitor by up to 37.8% and also beat the IBM system p550 four-socket Linux competitor. The ProLiant DL380 G6 utilized the new enhancement package 4 for SAP ERP 6.0 (Unicode) that introduced resource-intensive changes, while the competitors ran SAP ERP 6.0 (2005) without the enhancement. See page 2 for details of enhancement modifications.

- The HP ProLiant DL380 server maintains its dominant share in the 2U, 2P Novell SUSE Linux market with its innovative Generation 6 features and key options that allow for greater system efficiency, flexibility, and scalability.

- In addition, the performance scalability for Quad-Core processors for the ProLiant DL380 G6 was 39.3% better when compared to its previous Quad-Core generation. See page 2 for details.

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**Figure 1. HP ProLiant DL380 G6 two-socket performance scalability results compared to IBM’s 4-socket and Fujitsu Siemens’s 2-socket Linux results**

**HP DL380 G6 vs. IBM and Fujitsu Siemens Linux competitors**

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</table>

All results as of 04/08/09. Details can be found in Appendix A and at [http://www.sap.com/benchmark](http://www.sap.com/benchmark)

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The HP ProLiant DL380 G6 two-socket server running Linux outperformed the IBM p550 four-socket competitor. Comparing with the two-processor Fujitsu Siemens TX300 S4/ RX300 S4, the HP ProLiant DL380 G6 reigned with a 37.8% performance increase.
SAP Enhancement Package 4 for SAP ERP 6.0

On January 1, 2009, SAP upgraded the SAP SD Standard Application Benchmark to the SAP enhancement package 4 for SAP ERP 6.0, part of SAP Business Suite 7 software. These enhancements make the SAP SD Standard Application Benchmark more resource intensive, which has a direct impact on the benchmark results, according to SAP. The steps of the benchmark scenario remain unchanged. The updates include utilizing a Unicode codepage, a change in the subsecond response time to below one second, use of the new general ledger, and the activation of credit limit check functionality that marks a date of change for the SAP ERP benchmarks.¹

ProLiant server testing configurations

The ProLiant DL380 G6 rack server was configured as a two-processor system with two 2.93GHz Quad-Core Intel Xeon X5570 Processors (2 processors/8 cores/16 threads), with 64 KB L1 cache and 256 KB L2 cache per core, 8MB L3 cache per processor, and 48GB main memory. The server was running Novell SUSE Linux Enterprise Server 10 SP2 operating system, SAP MaxDB™ 7.8 database, and the SAP enhancement package 4 for SAP ERP 6.0. The HP ProLiant DL380 G6 achieved 3,171 SAP SD Benchmark users, equivalent to a throughput of 347,670 fully processed order line items per hour or 17,380 SAPS. The server also utilized one Smart Array P410i/512MB BBWC to 8 x 72GB 15K SAS internal drives and one Smart Array P800/512MB to an MSA70 with 25 x 72GB 15K SAS external drives. (Certification No. 2009006)

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

HP performance scalability increases with Quad-Core technology, new server generation

In addition, the ProLiant DL380 G6 rack server showed excellent two-processor performance scalability results with its next server generation and with the next generation of Quad-Core processors.

The ProLiant DL380 server showed a 39.3% increase in performance when it achieved 3,171 SAP SD Benchmark users (17,380 SAPS) for its Quad-Core result from its previous result of 2,275 SAP SD Benchmark users (11,400 SAPS). Overall, the ProLiant DL380 server showed a performance scalability progression of 76.6% going from a Quad-Core 2.66GHz result with 1,795 SAP SD Benchmark users (9,000 SAPS) to the 3,171 SAP SD Benchmark users (17,380 SAPS) result.

All results as of 04/08/2009. Details in Appendix B.

Table 1. Comparison of performance scalability from processor generation progression.

<table>
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<tr>
<th>Number of SAP SD Benchmark users</th>
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<tr>
<td>ProLiant DL380 G6 QC 2.93GHz</td>
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</table>

<table>
<thead>
<tr>
<th>HP DL380 G6 QC compared to previous generations</th>
</tr>
</thead>
</table>

Figure 2. ProLiant DL380 Quad-Core performance scalability

The HP ProLiant G6 Advantage

Known as the versatile, dependable workhorse, the HP ProLiant DL380 G6 2P rack server has unmatched flexibility with a vast array of applications that is sold to businesses of all sizes. And with the latest ProLiant DL380 generation, G6, comes the opportunity to continue the DL380 leadership with a server that:

- is flexible, ready to deploy for complex, dynamic environments
- has increased performance and durability
- is focused on energy efficiency

The NEW ProLiant DL380 G6 includes features that provide:

- **Leading Efficiency**
  - Increased power efficiency over G5
  - Ultimate power management
  - Rightsized power supplies
- **Extreme adaptability**
  - Flexible storage – with more servers with a choice of LFF or SFF drives and a choice of SDD support
  - Common power slot – which reduces the number of spares needed and simplifies ordering
  - Flexible I/O – more slots/more I/O choice (PCI-E x8, x16, and PCI-X), and more 10GbE options
  - Flexible Smart Array Controller – mix and match cache with batteries for performance and availability
- **Scalable Performance**
  - Application needs are changing
  - Configure to get the most out of the application
  - Common design for simple (File/Print) to complex (Virtualization)

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.

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 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 DL380 G6: www.hp.com/servers/proliantdl380


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

Appendix A

ProLiant DL380 G6 vs. IBM and Fujitsu Siemens Linux competitor results on two-tier SAP SD Standard Application Benchmark

**IBM system p550.** The IBM system p550 (Certification #2008002) was configured as a four-processor server (4 processors/8 cores/16 threads) with Dual-Core POWER6 processors 4.2GHz with 128KB L1 cache per core and 4MB L2 cache per core, and 64GB main memory. The IBM system p550 was running SAP ERP 6.0 with Red Hat Enterprise Linux 5 operating system and IBM DB2 9.5 database and achieved 3,104 SAP SD Benchmark users, equivalent to a throughput of 312,670 fully processed line items per hour and 15,630 total SAPS.

**Fujitsu Siemens PRIMERGY TX300 S4/RX300 S4.** The Fujitsu Siemens PRIMERGY TX300 S4/RX300 S4 (Certification #2008039) was configured as a two-processor server (2 processors/8 cores/8 threads) with Quad-Core Intel Xeon X5460 Processors 3.16GHz with 64KB L1 cache per core and 6MB L2 cache per 2 cores, and 32GB main memory. The Fujitsu Siemens PRIMERGY TX300 S4/RX300 S4 was running SAP ERP 6.0 with Novell SUSE Linux Enterprise Server 10 operating system and SAP MaxDB 7.7 database and achieved 2,300 SAP SD Benchmark users, equivalent to a throughput of 230,330 fully processed line items per hour and 11,520 total SAPS.

Appendix B

ProLiant DL380 Quad-Core scalability configuration and result on two-tier SAP SD Standard Application Benchmark

**HP ProLiant DL380 G5 April 2008 Quad-Core.** The HP ProLiant DL380 G5 (Certification #2008025) was configured as a two-processor server (2 processors/8 cores/8 threads) with Quad-Core Intel Xeon X5460 Processors 3.16GHz with 64KB L1 cache per core and 6MB L2 cache per 2 cores, and 32GB main memory. The HP ProLiant DL380 G5 was running SAP ERP 6.0 with Novell SUSE Linux Enterprise Server 10 operating system and SAP MaxDB 7.7 database and achieved 2,275 SAP SD Benchmark users, equivalent to a throughput of 228,000 fully processed line items per hour and 11,400 total SAPS.

**HP ProLiant DL380 G5 February 2007 Quad-Core.** The HP ProLiant DL380 G5 (Certification #2007028) was configured as a two-processor server (2 processors/8 cores/8 threads) with Quad-Core Intel Xeon X5355 Processors 2.66GHz with 64KB L1 cache per core and 4MB L2 cache per 2 cores, and 32GB main memory. The HP ProLiant DL380 G5 was running SAP ERP 6.0 with Novell SUSE Linux Enterprise Server 10 operating system and Oracle 10g database and achieved 1,795 SAP SD Benchmark users, equivalent to a throughput of 180,000 fully processed line items per hour and 9,000 total SAPS.

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