HP ProLiant BL465c G6 and ProLiant DL385 G6 show powerful two-processor performance results on two-tier SAP® Sales and Distribution Standard Application Benchmarks on Windows

HP Leadership with ProLiant servers

»The NEWEST generation of the HP ProLiant BL465c G6 Server Blade provides enterprise-class features for high performance and reliability without compromising energy efficiency or density. Also equipped with two AMD Opteron 2400 Series processors, the ProLiant BL465c G6 features a balanced architecture with serial hard drives, DDR2 memory, and multiple I/O cards for a performance system ideal for a full range of applications.

»With the LATEST HP ProLiant DL385 G6 rack server, customers can deploy more virtual machines with confidence. Offering twice the memory, double the NICs, and up to 16 SFF drives, and powered by two Multi-Core AMD Opteron™ 2400 Series processors with 6MB L3 cache, the ProLiant DL385 G6 provides leading performance for demanding scale-out applications and virtualization projects.

Customer Value

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

HP ProLiant Opteron 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 nearly half of all installations of SAP solutions, with more than 67,000 installations and 25,000 customers. With the ability to run multiple operating systems and a full spectrum of redundancy features for best-in-class availability, the ProLiant DL385 G6 offers maximum flexibility and adaptability for future growth for customers’ SAP solution-based environments. The ProLiant BL465c G6 supports AMD Dual Dynamic Power Management™ technology for optimum performance.

With the HP ProLiant DL385 G6 and ProLiant BL465c G6 server blade 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 05/29/09. Details can be found at http://www.sap.com/benchmark

Key Points

»The HP ProLiant BL465c G6 server blade and the ProLiant DL385 G6 rack server showed excellent performance for two-processor results running Windows on the two-tier SAP® Sales and Distribution (SD) Standard Application Benchmark. Utilizing the latest AMD Opteron 2400 Series technology, the HP ProLiant BL465c G6 recently achieved 2,355 SAP SD Benchmark users with 12,870 SAPS, while the ProLiant DL385 G6 earned 2,350 SAP SD Benchmark users with 12,830 SAPS.

»The HP ProLiant BL465c G6 offers the innovative Generation 6 features and key options that provide dependable, enhanced performance and durability.

»The HP ProLiant DL385 G6 is the world’s best-selling Opteron server and maintains its dominant share in the 2U, 2P market with the new G6 benefits in its rack server format that allows for greater system efficiency, flexibility, and scalability.

Table 1. HP ProLiant BL465c G6 and ProLiant DL385 G6 AMD Opteron two-processor 6-Core results on Windows on the two-tier SAP SD Standard Application Benchmark. The ProLiant servers were the first two-processor servers to run the SAP enhancement package 4 for the SAP ERP application 6.0 (Unicode). Configuration details can be found later in this paper.

Two-processor AMD Opteron configurations

<table>
<thead>
<tr>
<th>Model</th>
<th>SAP SD Benchmark users</th>
<th>SAPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP ProLiant BL465c G6 blade</td>
<td>2,355</td>
<td>12,870</td>
</tr>
<tr>
<td>HP ProLiant DL385 G6 rack</td>
<td>2,350</td>
<td>12,830</td>
</tr>
</tbody>
</table>

Technology for better business outcomes.
What’s New

The SAP SD Standard Application Benchmark was performed in Houston, Texas, on the HP ProLiant BL465c server blade and in Marlborough, Massachusetts, on the HP ProLiant DL385 rack server with the SAP enhancement package 4 for SAP ERP and the usage of Microsoft® Windows® Server 2008 Enterprise Edition and Microsoft SQL Server 2008.

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 BL465c G6 was configured as a two-processor system with two 2.6GHz Six-Core AMD Opteron 2435 Processors (2 processors/12 cores/12 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 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 BL465c G6 achieved 2,355 SAP SD Benchmark users, equivalent to a throughput of 257,330 fully processed order line items per hour or 12,870 SAPS. The server also utilized 1 x Smart Array P200i Controller with 64MB BBWC attached to 2 x 146GB, 10K SAS internal drives and 1 x QLogic Fibre Channel HBA attached to a Modular Smart Array 2012fc (MSA2012fc) with 12 x 72GB, 15K SAS external drives. Certification No. 2009020.

Equally, the ProLiant DL385 G6 rack server was configured as a two-processor system with two 2.6GHz Six-Core AMD Opteron 2435 Processors (2 processors/12 cores/12 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 also 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 DL385 G6 achieved 2,350 SAP SD Benchmark users, equivalent to a throughput of 256,670 fully processed order line items per hour or 12,830 SAPS. The server utilized 1 x Smart Array P400 Controller with 512MB BBWC attached to 8 x 72GB, 15K SAS external drives and 1 x Smart Array P800 Controller with 512MB cache attached to a Modular Smart Array 70 (MSA70) with 25 x 72GB, 15K SAS external drives. Certification No. 2009019.

All results as of 05/29/09. Details can be found at http://www.sap.com/benchmark

The ProLiant Advantage

It’s a new generation: ProLiant G6

Both the ProLiant BL465c G6 and DL385 G6 are designed as the latest ProLiant generation. With the G6 generation comes the opportunity to continue high performance results with servers that:

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

The NEW ProLiant servers also include 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)

HP ProLiant BL465c G6 server blade

With features equal to standard 1U rack mount servers, the two-processor BL465c G6 combines energy efficient compute power and high density with expanded memory and I/O for maximum performance. In this small form factor, the BL465c G6 includes features to ensure high availability such as hot plug hard drives, memory interleaving, embedded RAID capability, and enhanced remote Lights-Out management.

Its benefits feature:
- Concentrated compute power
- Deployment versatility in an efficient dense form factor
- Industry-leading management and configuration tools

HP ProLiant DL385 G6 rack server

Known as the “versatile, dependable workhorse”, the ProLiant DL385 G6 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. The two-processor HP ProLiant DL385 G6, running SAP applications, provides industry-leading management, performance, and availability for growing businesses.

The new HP ProLiant DL385 G6 server offers twice the memory, double the NICs, and up to 16 drives than its previous generation. Powered by two Quad-Core AMD Opteron 2400 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:

- Multi-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 nearly half of all SAP solution-based installations with more than 67,000+ 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 BL465c G6:  www.hp.com/servers/proliantbl465cg6
HP ProLiant DL385 G6:  www.hp.com/servers/proliantdl385g6
SAP benchmark details:  http://www.sap.com/benchmark

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