New HP four-processor ProLiant BL685c G7 achieves excellent performance and outstanding scalability on two-tier SAP® Sales and Distribution (SD) standard application benchmark with SAP enhancement package 4 for SAP ERP 6.0

Key Take Aways

- New HP four-processor, 48-core ProLiant BL685c Generation 7 achieves outstanding performance
- 1.96X scaling over previous HP ProLiant four-processor BL685c Generation 6
- 1.97X scaling over the two-processor DL385 G7
- New HP ProLiant x86 G7 servers offer game-changing capabilities in reliability, availability, and performance to advance the Converged Infrastructure

Figure 1. The ProLiant BL685c G7 4-processor, 48-core server blade scaling as compared to two other results. Configuration details of BL685c G7 can be found on page 3 and configuration details of all servers in the Appendix on page 3.

HP ProLiant BL685c G7 achieves up to 1.97X scaling

HP provides remarkable processor scalability

In addition to achieving leading Windows performance results on the two-tier SAP® Sales and Distribution (SD) standard application benchmark, the ProLiant BL685c G7 server showed excellent four-processor performance scalability. The ProLiant BL685c G7 server showed performance scaling of 1.96X when it achieved 8,675 SAP SD benchmark users (47,420 SAPS) as compared to the four-processor result of 4,422 SAP SD benchmark users (24,230 SAPS) with the previous Generation 6 ProLiant BL685c and scaling of 1.97X as compared to the two-processor result of 4,394 SAP SD benchmark users (24,020 SAPS) with the ProLiant DL385 G7.

HP offers the most comprehensive portfolio of scale-up and scale-out solutions in the industry with six new G7 generation servers based on Intel® Xeon® 7500 Series and AMD Opteron™ 6100 Series processors. HP is enhancing the industry’s #1 x86 portfolio with this new class of scale up systems optimized for the most
demanding, data-intensive x86 workloads and providing a foundation for a converged infrastructure.

- Reduced data center footprint and cost with a consolidation ratio of at least 91:1 through performance gains achieved by balanced scaling
- Payback in as little as 30 days with breakthrough efficiencies

**What this means for customers**

Clients want less complexity and more efficiency in their IT operations and across their network infrastructure. The data center of the future needs to help eliminate silos and integrate vendors’ technologies into pools of interoperable resources to provide greater flexibility as business needs change. HP is the only company that can deliver a single common, modular architecture across the data center from x86 to Superdome – HP’s Converged Infrastructure.

The ProLiant BL685c G7 is an example of the innovative thinking in Converged Infrastructure, as the new server combines ProLiant’s long-standing x86 leadership with expertise and technologies from HP’s heritage in mission-critical computing. The HP ProLiant 685c G7 is the world’s first 4P blade shipping with integrated FlexFabric networking. The BL685c G7 delivers four-socket performance at two socket economics, with enterprise-class high performance and reliability. With G7, HP introduces the industry’s simplest server edge convergence solution delivered by HP Virtual Connect FlexFabric 10Gb/24-port Module and HP ProLiant G7 server blades with embedded dual port FlexFabric 10Gb network adapters. Customers can converge storage and network traffic by dividing the embedded dual-port 10GbE adapter into 8 connections using Virtual Connect FlexFabric technology, available only from HP.

**Business transformation**

Companies leveraging HP Converged Infrastructure can use the same architecture to run and manage multiple workloads across servers, storage, and networking. This significantly reduces complexity, resource requirements, and costs. And with the ProLiant BL685c G7 technology and SAP software, customers can enjoy the benefits of:

- Providing basic information to configure and size SAP Business Suite software
- Allowing users to compare different platforms
- Enabling proof-of-concepts scenarios
- Providing an outlook for future performance levels (new platforms, new servers, and so on)

**Customer advantages of using SAP software and HP ProLiant servers**

Leading companies realize that to succeed they must deploy strategies faster than the competition – and close the gap between strategic goals and operational execution. With platform technology from SAP AG, customers can keep their competitive edge with agile operations that can support continuous business improvement. SAP standard application benchmarks test the hardware and database performance of SAP applications and components. The SAP SD standard application benchmark covers a sell-from-stock scenario, which includes the creation of a customer order with five line items and the corresponding delivery with subsequent goods movement and invoicing.

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:

- Earn leading results on the two-tier SAP SD standard application benchmark
- Run almost 50 percent of installations of SAP solutions, with more than 60,000 installations and 25,000 customers

All results as of 06-21-2010. Details can be found at [http://www.sap.com/benchmark](http://www.sap.com/benchmark).

**HP server management advantages with G7**

**Only HP ProLiant servers give customers the freedom to unlock their full potential with the help of HP Insight Control.**

ProLiant G7 servers introduce next-generation Insight Control remote management functionality, powered by iLO. The third generation of iLO brings new level of remote server management performance, user experience, and standards support to ProLiant customers. HP Insight Control enables customers to deploy and migrate ProLiant servers quickly and reliably, proactively manage ProLiant server health – be it physical or virtual, control ProLiant servers from anywhere and optimize power confidently. The net result is the ability to get work done faster whether your server is across the hall or across the globe.

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1 Based on HP internal testing comparing hardware on DL360G4 to DL585 G7
Bottom Line

The ProLiant Advantage. HP Converged Infrastructure and HP ProLiant servers provide the thought-leadership innovation that can give customers’ businesses a technology edge. With our continuous advancements in the science of server computing combined with new processor technology and SAP software, HP can help you gain an IT advantage over your competitive rivals.

Benchmark Configurations

HP received certification from SAP AG of the results of the ProLiant BL685c G7 on the two-tier SAP SD standard application benchmark (certification #2010026). The HP ProLiant BL685c G7 was set up as a four-processor system with four 2.6-GHz 12-Core AMD Opteron Processor 6174 (4 processors/48 cores/48 threads), with 128 KB L1 cache per core and 512 KB L2 cache per core, 12 MB L3 cache per processor, and 256 GB main memory (32 x 8GB PC3-10600 DIMMs, 1333MHz). The server was also configured with one QLogic Fibre Channel Mezzanine card connected to a Modular Storage Array (MSA) 2324fc with 25 x 72GB 15K SAS SFF external drives. The server was running Windows Server 2008 EE x64 operating system, SQL Server 2008 EE x64 database, and the SAP enhancement package 4 for SAP ERP 6.0 application. The HP ProLiant BL685c G7 achieved 8,675 SAP SD benchmark users, equivalent to a throughput of 948,330 fully processed order line items per hour or 47,420 SAPs. All results as of 06-21-10; details can be found at http://www.sap.com/benchmark.

About the SAP SD Standard Application Benchmark with SAP Enhancement Package 4 for SAP ERP 6.0

The SAP SD standard application benchmark covers a sell-from-stock scenario, which includes the creation of a customer order with five line items and the corresponding delivery with subsequent goods movement and invoicing. The SAP Application Performance Standard (SAPS) is a hardware-independent unit that describes the performance of a system configuration in the SAP environment. It is derived from the SAP SD standard application benchmark, where 100 SAPS is defined as 2,000 fully business processed order line items per hour. In technical terms, this throughput is achieved by processing 6,000 dialog steps (screen changes), 2,000 postings per hour in the SAP SD standard application benchmark, or 2,400 SAP transactions. In the SAP SD standard application benchmark, fully business processed means the full business process of an order line item: creating the order, creating a delivery note for the order, displaying the order, changing the delivery, posting a goods issue, listing orders, and creating an invoice.

For more information check out:
HP ProLiant G7 servers: www.hp.com/servers/

Appendix A – Configuration and Certification Number Details

All results noted were achieved on the two-tier SAP SD standard application benchmark and all servers ran SAP enhancement package 4 for SAP ERP 6.0.

<table>
<thead>
<tr>
<th>Platform, processor type (processors/cores/threads), memory</th>
<th>Certification number</th>
<th>OS, database, and SAP software</th>
<th>SAP SD benchmark users</th>
<th>Order line items/hour</th>
<th>SAPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP ProLiant BL685c G7, 4 processors, 12-core 2.2 GHz AMD Opteron Processor 6174 (4/48/48), 256 GB RAM</td>
<td>2010026</td>
<td>Windows Server 2008 EE, SQL Server 2008, SAP enhancement package 4 for SAP ERP 6.0</td>
<td>8,675</td>
<td>948,330</td>
<td>47,420</td>
</tr>
<tr>
<td>HP ProLiant BL685c G6, 4 processors, 6-core 2.6 GHz AMD Opteron Processor 8435 (8/24/24), 64 GB RAM</td>
<td>2009021</td>
<td>Windows Server 2008 EE, SQL Server 2008, SAP enhancement package 4 for SAP ERP 6.0</td>
<td>4,442</td>
<td>48,467</td>
<td>24,230</td>
</tr>
</tbody>
</table>

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