**TWICE AS NICE:**
HP ProLiant DL380 G7, DL385 G7 take world records for performance, price/performance on 100GB TPC-H benchmark

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**Executive summary**

The HP ProLiant DL380 G7 and DL385 G7 swept away the competition, earning the #1 result for performance and price/performance, consecutively, on the 100GB TPC-H benchmark.

**Key Take Aways:**

- HP ProLiant DL380 G7 is #1 in the TPC-H@100GB non-clustered performance category
- HP ProLiant DL385 G7 is #1 in the TPC-H@100GB price/performance category
- Up to more than 1.5X greater performance than Sun Fire X4270 and Kickfire Appliance 2300
- Up to 2X less price/performance than the Sun Fire X4270 and Kickfire Appliance 2300
- HP ProLiant servers now own SIX of the TOP TEN performance results and FIVE of the TOP TEN price/performance results for the TPC-H@100GB category

**HP uses less energy**

Utilizing the new TPC-Energy parameters, both the ProLiant DL380 G7 and DL385 G7 achieved an impressive energy/performance result of 5.93 Watts/KQphH and 6.48 Watts/KQphH@100GB, consecutively, on the TPC-H benchmark. HP holds the record for first TPC-H result with the TPC-Energy metric.

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**Figure 1.** Best non-clustered TPC-H@100GB results for each vendor.

Results as of 07/02/10; see: www.tpc.org. Per socket improvement as compared to both the Sun Fire X4270 and Kickfire Appliance 2300 results. #1 claim refers to the top single-system result on TPC-H@100GB benchmark.
Benchmark configuration

**ProLiant DL380 G7:** The HP ProLiant DL380 G7 Server with 6-core Intel X5680 3.33GHz processors is the #1 non-clustered performance result on the QphH @ 100GB benchmark across all operating systems and database environments with its result of 73,974.6 QphH@100GB at an outstanding price/performance of $.58 USD/QphH@100GB and an energy metric of 5.93 Watts/KQphH@100GB.

**ProLiant DL385 G7:** The HP ProLiant DL385 G7 Server with 12-core AMD Opteron 6176 SE 2.33GHz processors is the #1 price/performance result on the QphH @ 100GB benchmark across all operating systems and database environments with its result of 71,438.3 QphH@100GB at the record-breaking price/performance of $.51 USD/QphH@100GB and an energy metric of 6.48 Watts/KQphH@100GB.

Both servers were configured with 12MB L3 cache, 192GB main memory, 2 x 72GB 6G 15K rpm SFF SAS hard disk drives, one Smart Array P410i Controller, 4 x 60GB SDD SFF SATA hard disk drives and one 300GB 6G 10k rpm SFF SAS hard disk drive for a total disk storage of 684GB. Both servers also ran with Microsoft Windows 2008 R2 Enterprise Edition operating system and Microsoft SQL Server 2008 R2 Enterprise Edition database. For more details, go to: http://www.tpc.org/tpch/results/tpch_price_perf_results.asp

<table>
<thead>
<tr>
<th>Platform, Processor (chips/cores/threads), Memory</th>
<th>Availability</th>
<th>OS and Database</th>
<th>QphH@100GB</th>
<th>USD $/QphH @ 1008</th>
<th>Watts per KQphH @ 100GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP ProLiant DL380 G7</td>
<td>07/02/10</td>
<td>Microsoft Windows Server 2008 R2 Ent. Ed. SQL Server 2008 R2 Ent. Ed.</td>
<td>73,974.6</td>
<td>.58</td>
<td>5.92</td>
</tr>
<tr>
<td>HP ProLiant DL385 G7</td>
<td>07/02/10</td>
<td>Microsoft Windows Server 2008 R2 Ent. Ed. SQL Server 2008 R2 Ent. Ed.</td>
<td>71,438.3</td>
<td>.51</td>
<td>6.48</td>
</tr>
<tr>
<td>Sun Fire X4270</td>
<td>12/04/09</td>
<td>Sybase 1Q Single App. Server Ed. v15.1 ESD #1</td>
<td>53,501</td>
<td>$1.14</td>
<td>NA</td>
</tr>
<tr>
<td>Kickfire Appliance 2300</td>
<td>10/14/08</td>
<td>Kickfire CentOS 5.0, MySQL 5.1 w/ kickfire database</td>
<td>49,228</td>
<td>.70</td>
<td>NA</td>
</tr>
</tbody>
</table>

**ProLiant G7 Server advantages**

The HP ProLiant DL380 G7 Server, the world’s best-selling rack server, continues to deliver on its heritage of engineering excellence with increased flexibility and performance, enterprise-class uptime and manageability, two-socket Intel Xeon performance, and 2U density for a variety of applications. The HP ProLiant DL385 G7 Server, also known as the versatile, dependable workhorse, is the world’s best-selling AMD Opteron™ processor-based rack server, maintaining its dominant share in the 2U, 2P market with new G7 benefits in its rack server format that allows for greater system efficiency, flexibility, and scalability.

**HP takes Top Ten spots for TPC-H @ 100GB performance, price/performance**

With the latest ProLiant TPC-H @ 100GB benchmark, HP servers now have six out of the Top Ten results for TPC-H @ 100GB performance and five out of the Top Ten results for TPC-H @ 100GB price/performance.

**AMD and HP a balanced partnership**

Since the forging of the HP and AMD partnership over 10 years ago, new best-in-class performance benchmarks are being established continually, along with new standards for compatibility, security, and reliability. It’s a balance of power that will provide your organization with a flexible foundation that can meet your future computing requirements. For more on the AMD/HP partnership, see http://www.hp.com/sbso/solutions/pc_expertise/amd.html?jumpid=hpr_R1002_USEN
About the TPC-Energy benchmark
TPC-Energy is a new TPC specification which augments the existing TPC Benchmarks with Energy Metrics developed by the TPC. The Energy Specification is a continuation of ongoing efforts to meet the needs of a rapidly changing industry. Customers will be able to go to the TPC Web site to identify systems that meet their price, performance, and energy requirements. Systems that use less energy also have reduced cooling requirements. The reporting of energy metrics are optional to not restrict TPC benchmark publications and allow time for implementers to invest in required infrastructure. Competitive demands will encourage test sponsors to include energy metrics as soon as possible.

About the TPC-H benchmark
The TPC Benchmark™H (TPC-H) is a decision support benchmark. It consists of a suite of business oriented ad-hoc queries and concurrent data modifications. The queries and the data populating the database have been chosen to have broad industry-wide relevance. This benchmark illustrates decision support systems that examine large volumes of data, execute queries with a high degree of complexity, and give answers to critical business questions.

Bottom Line
The ProLiant Advantage. Now, HP customers can identify systems that meet their performance requirements. These TPC-H #1 results show that the HP ProLiant DL380 G7 and DL385 G7 can deliver more durability for customers’ needs with increased performance for demanding scale-out applications at a lesser cost.

For more information, check out:
HP ProLiant DL380 G7 and DL385 G7: www.hp.com/servers/